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DISPLACEMENTS OF THE UTERUS.*

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It is convenient to treat the subject of displacements of the pelvic organs under the head of uterine displacements, but at the same time we must remember that a uterine deviation may not be the essential factor in the morbid sequence, but only an incident. No subject seems to have occupied the attention of gynæcologists more than this. Every gynæcologist has seen marked displacements in women, who presented no symptoms of disease. Certain authors, basing their statements on this fact, have not hesitated to deny the pathological importance of deviation completely. They go from one extreme to the other. If the displacement does not constitute a disease in itself, it creates for the displaced organs a marked vulnerability, which results from the alteration of the circulation produced by increased venous congestion, and the nutritive changes which may be the consequences of this condition. It also favours and preserves inflammation of the uterus, both on its surface and its cavity. Prolapse of the adnexa, which frequently accompanies this condition, gives rise to various reflex nervous troubles, the importance of which, especially in retrodisplacements, cannot be neglected.

Before discussing the various displacements of the uterus, it is necessary to consider the normal position of that organ, and the mechanism of its support. The normal position of the uterus is difficult to define accurately, because it is essentially a mobile organ, and its direction varies with the position of the individual and the state of the bladder and rectum. Its long axis forms a right angle with the long axis of the vagina. It is situated in front of the rectum. It will thus be seen that it lies between two organs, which alternately distend and contract, hence, while the position of the uterus is relatively the same, it varies with the position of the bladder and rectum. Its fundus is slightly anteflexed, with the concavity of the curve facing forwards towards the bladder, whilst its cervix is held backwards towards the coccyx by the utero-sacral ligaments. It will thus be seen that the uterus is not fixed in its position, but moves normally within certain limits, and is influenced by various conditions. The act of respiration imparts to the uterus a continuous up and down motion during inspiration and expiration; a full bladder pushes it somewhat backward, whilst an overloaded rectum accentuates its forward position, and it is only when the temporary deviation becomes fixed, that a displacement is established, which affects both function and relation. Various theories are held as regards the mechanism of the support of the uterus, and the nature of the influences that are at work, by means of which the uterus is suspended in the pelvic cavity, but I think that no one factor is independent of another; the harmonious action of all determines the result. It is seldom that one factor alone is affected. It used to be taught that the uterus was held in position by its ligaments, eight in number, two round, two broad, two utero-sacral and two utero-vaginal ligaments. With the exception of the round ligaments, which are muscular structures given off from the uterus, the uterine ligaments are folds of peritoneum containing a small amount of unstriped muscle. When the woman is erect, the insertions and origins of the various uterine ligaments lie in the same horizontal plane. In no case is the insertion of any of the ligaments higher than its origin. It therefore follows that these ligaments cannot act as suspensory ligaments when the uterus is in its normal position. The truth of this can be easily demonstrated if the cervix is caught with a tenaculum, when the woman is lying on her back. The uterus may, with but very little force, be drawn downwards towards the *ostium vaginae* to the extent of an inch or two, and similarly by a slight digital pressure on the cervix, the uterus can be pushed upwards from one to two inches above its normal position. The uterine ligaments act as guy-ropes. They are normally relaxed, and their function is, not to support the uterus in a certain fixed position, but, like a guy-rope, to confine the organ within certain limits; they steady it and prevent too great lateral or fore-and-aft movement. When the uterus from any cause moves beyond these limits, the ligaments become tense, and stop further movement. While the uterine ligaments are not a constant support to the uterus, their function as guy-ropes is absolutely essential for maintaining its normal position. If for any reason the uterus becomes displaced backward or downward for any length of time, the ligaments become so overstretched and weakened that they soon lose their normal strength, length and elasticity. Normally, the intra-abdominal viscera lie against the posterior surface of the uterus, and the pressure from above therefore increases the anterior position of the organ by forcing the fundus towards the pubes. As long as the intra-abdominal pressure is directed against the posterior surface, a backward displacement cannot occur, but if the intestines get between fundus and bladder, then the force from above is directed against the anterior face of the uterus, and the organ is driven backward. When the ligaments are normal, they do not permit the uterus to fall back, but any interference with normal intra-abdominal pressure is a strong factor in causing uterine displacements. The habit of wearing tight corsets weakens the abdominal walls, and crowd the pelvic organs down; heavy skirts hung round the waist have the same effect; the habit common amongst women of going a long time with a full

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bladder forces the uterus backwards, and allows the intra-abdominal force to act on the anterior, instead of the posterior wall. The round ligaments for a time counteract this force, but in time they get relaxed and elongated. Anything that increases the specific gravity of the uterus will make it sink lower in the pelvis. Sub-involution, congestion from inflammation, and neoplasms in its walls may do this. Retroflexion predisposes towards prolapse, because the uterus cannot descend unless its cervix is directed down the vaginal canal. Many cases of prolapse would be avoided, even though there might be some perineal injury, if women remained in bed a sufficient time after delivery. By rising too early, prolapse and displacement are favoured for many reasons. The uterus is large and heavy, its ligaments are elongated, and the abdominal walls are weak. Consequently, the retentive power of the abdomen is poor, the vagina is flabby and much larger than normal, the genital outlet has not contracted, and the muscular and fascial supports are stretched and relaxed. For this reason I consider the teaching of some modern schools of early rising after labour a very dangerous one, and likely to be followed by bad results.

As the uterus is suspended in the pelvis between the abdominal cavity and the pelvic floor, it naturally follows that the latter contributes materially to its support. The stout sling of muscles and fascia which compose the perineum is so arranged that it gives the constant support needed to the pelvic organs under ordinary conditions. All the organs of the pelvis act as cushions upon which the uterus rests, and, consequently, any interference with their normal position and condition results in uterine displacement. Injuries of the perineum involving laceration of the muscles of the sacral segment of the pelvic floor are the usual causes of procidentia of the uterus and hernia of the pelvic contents. When the perineum is lacerated in labour, it no longer acts as a bulwark against the downward intra-abdominal pressure and force of straining at stool and at urination. This force is exerted against the less resistent bladder and rectal walls. The latter are consequently pouched into the vaginal outlet, producing a cystocele and rectocele. The vaginal walls, being attached to the uterus, and being displaced downwards, must, by traction, pull that organ to a lower level. The uterus, being connected with the bladder, rectum tubes and ovaries, draws these organs out of place, as it descends itself, and disturbs their relation to one another. It will be thus seen that the perineum is the main factor in supporting the uterus. The normal vagina is a closed sac, with its posterior wall drawn up by the perineal muscles against its anterior wall. The uterine ligaments and vagina are insufficient to hold that organ in position, unless supported in turns by the strong bulwark presented by the perineum; the intra-abdominal pressure falls on the vaginal canal at right angles, and undue muscular exertion merely tends to increase the anteflexion of the uterus.

Time will only allow me to make a few remarks on the three principal deviations of the uterus: (*a*) anteflexion, (*b*) retroflexion, and (*c*) prolapse.

(*a*) Anteflexion.

As I have already said, a certain degree of anteflexion and anteversion is normal, but anteflexions only become pathological when the mobility at the angle of flexure is increased, diminished or absent, and is accompanied by (*a*) dysmenorrhœa, (*b*) sterility, (*c*) endometritis. The evils of pathological anteflexion are more a matter of the associated evils than of the displacement *per se*. There are two chief varieties of anteflexion:—

(1) Corporeal or acquired anteflexion, in which the cervix has the normal backward direction and the body of uterus is bent forward upon it. In this condition the whole structure is relatively high in the pelvis.

(2) Cervico-corporeal or congenital anteflexion. In this condition the fundus is bent on the bladder and the cervix is so sharply flexed on the body that its axis is the same as that of the vagina. The whole structure is relatively low in the pelvis. This form of anteflexion is probably congenital, and is by no means uncommon in young virgins; it is probably due to some lack of development, the cervix being developed in the usual manner at puberty, but the corpus remains undeveloped (infantile uterus). The poorly-developed, flaccid body of the uterus, is forced down on its cervix by intra-abdominal pressure. Some authors consider that this condition is due to a previous pelvic inflammation, causing thickening and shortening of the utero-sacral ligaments, which, by constant traction, causes an elongation of the posterior wall of the cervix. I have never been able to satisfy myself that there was any evidence of previous pelvic inflammation in any cases I have dealt with.

The dysmenorrhœa of anteflexion is generally characteristic. It begins a few hours before the menses start, and is relieved when the flow comes freely. This may depend on the constrictions of the uterine canal at the angle of flexure. It causes the blood to accumulate and to coagulate in the body of uterus, from which it is expelled at intervals by uterine contraction, simulating labour pains. As the blood is delayed in its passage by the kink in the cervix, it clots; the pain is therefore always severe just before the passage of a clot. The obstruction of the veins at angle of flexure causes intense venous congestion of the entire body of uterus. Pain is due to a hypersensitive condition of the cervix, caused by the pressure of the swollen vessels on the nerve filaments. The explanation of the sterility is to be sought for rather in the general congestion than in any mechanical causes. The purely obstructive theory of sterility appears to have scarcely any foundation, for we all know that the obstacles, which are overcome by spermatozoa in their progress towards the uterine cavity, are, to say the least, remarkable.

Treatment.

The treatment is first to the complications, and second to the mechanical indications for straightening the flexed uterus. If leucorrhœa and endometritis are present, curettage is necessary, as well as some mechanical means to straighten the uterus, so

that the circulation may be relieved and the uterine canal may perform its natural function as a drainage tube. Sometimes a forcible dilatation, either by Hegar's dilators or Goodell's modification of Ellinger's dilator straighten out the canal permanently and give relief. My practice is to dilate the cervix fully under an anæsthetic, and with the fullest antiseptic precautions. Many of the patients are difficult to dilate, and, owing to the sharp curve in the cervix, there is a grave danger of perforating the posterior wall of the cervix if much force is used. When I cannot dilate the cervix freely, I pack it with a strip of gauze. This has a softening effect on the rigid cervix, and in 24 hours it will dilate readily. After dilatation, the uterus is curetted and swabbed with iodine; the entire uterus is then packed with iodoform gauze, particular care being taken to pack widely through the cervical canal. The gauze is left for 24 hours, and renewed every day or two, until close to next period. It straightens out the canal, and, acting as a foreign body, causes the uterus to contract, thus stimulating development. This procedure may have to be repeated two or three times, or a medium-sized dilator may be passed, a day or so before the expected period for a few months. In a few selected cases, I have had good results from the use of a stem pessary. I know there is a prejudice against the stem pessary on the part of us who practised gynæcology in the antiseptic days or the earlier days of asepsis. It was formerly used frequently, and in many cases led to severe pelvic inflammation, but in selected cases it has, in my opinion, its place, and can be used with little risk, provided that strict aseptic precautions are observed, and that it is never employed in infected cases. I use Duke's spiral spring pessary; this pessary is hollow in the centre, and therefore allows free drainage, and, as it is flexible, it does not cause pressure symptoms, where it comes in contact with the endometrium. The pessary is left in until close to the next period, unless there are contra-indications. I have tried leaving it in during a period, but found that the menstrual fluid caked in the hollow tube, and blocked it. In cases of poorly developed uteri, the logical treatment consists in using remedies to produce development; the stem pessary does this. In many cases, the results are eminently satisfactory, and I have never seen any untoward results follow the use of this instrument. Many cases of anteflexion of the congenital type are aggravated by the settling back of the uterus. Some of them can be improved by a shortening of the round ligament and amputation of the cervix, if it is markedly elongated. If the posterior lip of the cervix is much elongated, it can be overcome by Dudley operation. This operation has for its object the utilization of dilatation and posterior division of the cervix in such a way as not only to enlarge the calibre of the uterine canal, but also to straighten out the uterus and thereby overcome the circulatory obstruction. The posterior lip of the cervix is divided up to its vaginal attachment, a small angle is cut out of each side, the cut surface is then folded on itself by a single silkworm-gut suture; this brings the external os back to its normal position towards the hollow of the sacrum, instead of forward towards the vaginal outlet. No matter what form of treatment is used, anteflexion of the uterus, especially the congenital type, is, in my opinion, the most unsatisfactory condition a gynæcologist has to deal with.

(*b*) Retroflexion.

We see many cases of retroflexion of the uterus, which are discovered by accident, and apparently cause no symptoms. But the large percentage of women who have a retrodisplaced uterus for any length of time suffer from constant backache, headache, increased menstrual and intermenstrual discharges, and many nervous phenomena; in fact, some are chronic invalids. As a rule, retrodisplacement causes symptoms, or aggravates symptoms due to some other disturbance. The principal causes of retroflexion may be summarized, briefly, as follows:—

(1) Habitual distension of bladder.
(2) Increased weight of the uterus from subinvolution, chronic inflammatory thickening tumours in its walls, especially in the posterior wall.
(3) Laceration of the pelvic floor, overstretching or subsequent involution.
(4) Overstreteching of its round, broad or uterosacral ligaments.
(5) Getting up too soon after labour, or doing work too soon. (Displacement is favoured by the heavy uterus and the relaxed vaginal wall, pelvic floor and ligaments.)
(6) Peritonitis of perisalpingitis forming adhesions, which adhesions contract later and tend to draw the *fundus uteri* backwards.
(7) Weakening of the abdominal wall from faulty dress or any condition that alters the normal intra-abdominal pressure.
(8) Sudden straining, or violent fall in the sitting position.

Treatment.

This is either mechanical, by vaginal pessary, or operative. The field for the use of the pessary must be a restricted one. It can only be used in cases where the displaced organs are easily replaced, and where the pessary is capable of holding them in place, and can be worn without discomfort.

Pessaries are contra-indicated in retrodeviation of considerable duration. They are harmful in cases where inflammatory troubles, prolapse of adnexa or lacerations of cervix are present, and are useless in cases when the pelvic floor is lacerated. Failure to recognize and appreciate the contra-indications accounts not only for the failures and the disappointments, but also for the many evil results which have followed the indiscriminate attempts to treat such displacements by mechanical supports. In a paper on displacements at the Sydney Congress in 1911, the writer, in speaking of pessaries, said, the round ones might be used for parlour quoits, the various others as drawing-room puzzles.

There are conditions, such as disease of the heart, kidneys, diabetes, etc., which make all operations unjustifiable but those that are urgently necessary. These patients can only be treated with a pessary. In

the large majority of cases of retroflexion, which follow childbirth, a well-fitting pessary, temporarily used, is curative. It would be wise if every practitioner made a point of examining all cases of parturition at the end of the fourth week, and if the uterus is found retrodisplaced, of replacing it and inserting a pessary. The patient should be examined again at the end of the tenth or twelfth week, and if the uterus still maintains its normal position, the pessary should be removed and the patient dismissed cured. By lifting the uterus in the pelvis with a pessary, the strain is removed from the ligaments and the process of involution is facilitated and retained until their tonicity has been regained. In cases of long standing displacement, however, the powers of involution cannot be inaugurated, so that the normal position of the uterus is maintained only as long as the pessary is worn. The pregnant or recently emptied uterus can be replaced much more easily by putting the patient in the knee-chest position. In this position the uterus drops forward, the intra-abdominal pressure is removed, and the pessary can then be inserted.

Operative Treatment.

A great number of operations have been invented for this condition; many of them are rather riskful, experimental and unanatomical, but, nowadays, I presume that each surgeon has settled down to some operation which gives him more or less satisfaction. Ventro-suspension, ventro-fixation, internal plication of the round ligaments, vesico- or vagino-fixation have all been tried extensively and discarded to a large extent, either because some of them caused sudden and unexpected trouble in childbirth, or because the uterine displacements recurred altogether too frequently. It is not my intention to weary you by discussing the many operations which have been introduced for this condition, but will only give you my experience of a few of them.

Alexander's Operation.—This used to be called the classical operation for retrodisplacements, but it has a very limited field of usefulness. It is only indicated in cases where the uterine appendages are healthy, and where the uterus can be raised to its normal position and retained there. It is especially indicated in virgins or nulliparous women, who furnish no evidence of infection, either from sepsis or gonorrhœa. The cardinal feature of this operation is the use of blunt dissection, which keeps the field of operation free from blood. Once the tissues get soiled with blood it is difficult to distinguish the round ligaments, even when exposed.

Ventro-Suspension.—This operation, introduced by Howard Kelly, was extensively used for a number of years. However, I think the consensus of opinion now is that ventro-suspension is not an altogether safe procedure in women in the child-bearing period. In common with others, I employed this operation for some years, but for the last 10 years I have not used it in women of child-bearing years. My experience of it was that in some cases the uterus remained fixed by a strong band, suggestive of trouble during the expansion of the uterus in pregnancy. In other cases, a long, thin ligament was found, which was taking no active part in keeping the uterus in place; it looked as if it might cause intestinal obstructions at any time. In other cases, the uterus was found lying back in its former faulty position. Many cases were reported where Cæsarian section was found necessary in pregnancy following ventro-suspension. In my experience, ventro-suspension either failed to keep the uterus in position or gave a faulty result in about 15% of my cases, in spite of the fact that I was always careful to carry out the technique, as laid down by Howard Kelly. In fact, had it not been that the operation bore his name, and was so easily performed, it would not have stood the test of time as long as it did. I feel strongly convinced that it is not only an unscientific, but also a dangerous operation.

The failure of the peritoneum to act as a reliable structure for surgical reconstructions caused careful workers to look around for some more reliable and permanent structure to utilize surgically for this common disorder. This they found in the round ligaments. These structures are composed of muscular fibre derived from the uterus wall, and are really a part of the uterus. They therefore undergo with the uterus the physiological changes incidental to child-bearing, namely, evolution during gestation and involutions after labour. For this reason, the round ligaments supply the only possibility of a permanent cure for retrodisplacements, for all fixation and bands of a peritoneal or other source have no capacity to retract after labour.

Baldy-Webster's Operation.—In this operation the round ligaments are brought through an opening in the broad ligament, and fastened to the back of the uterus. All other operations, in which the round ligaments are used to suspend the uterus, depend entirely for their success on suspension, pure and simple. In fact, the uterus is lifted out of the pelvis into the abdomen and suspended there with lessened mobility and the full weight of the downward drag depending on the integrity of the round ligaments. In Baldy's operation, the uterus is lifted up and sustained by the encircling round ligaments. During certain movements, the fundus has a tendency to go backward; should this occur, the intra-abdominal force would soon be exerted on the anterior surface of the uterus, and the fundus forced to a posterior position. In this operation, however, there are three forces at play which prevent this accident: (1) The sling at the back of the uterus formed by the round ligaments meets the force urging the fundus posteriorly and obstructs that action, (2) the force of the fundus against the encircling round ligaments causes a pull on the ligaments at their attachment to the cornu of the uterus, and the harder this pull, the more the tendency to draw the fundus downward and forward. The uterus rides in a cradle, as it were, moveable backwards and forwards, without being able to get back beyond its centre of gravity, hence, the third force, the intra-abdominal force, is constant in its pressure on the posterior surface of the uterus. A permanent result is thus trebly insured. One thing only can spoil the operation; that is, the complete breaking down of the suturing. Undoubtedly, this accident hap-

pens occasionally in all suspension operations. In some of my early cases the suturing apparently gave way when I used plain, iodized catgut. To make sure of the suturing remaining, it is necessary to use chromic gut or Japanese silk. I prefer the latter. I have performed this operation in nearly 400 cases, and, taking it as a whole, I am satisfied with my end results. I consider that I get permanent results in 95% of my cases. It is impossible to follow up every patient, and especially hospital patients, but my experience is that the failures generally come to light, and, when they do not, it is reasonable to assume that the patients are cured. Another advantage of this operation is that it makes certain of elevating the tubes and ovaries permanently. When the uterus is thrown forward by almost any other operation, the ovary usually rises in the pelvis with it. There is, however, a certain group of cases in which the ovarian ligaments are so stretched that, in spite of the fundus being brought forward, the ovaries are still prolapsed. There is one class of case which requires special care in this operation; I refer to those cases in which a varicocele of the broad ligament is present. These large, thin-walled veins are very easily torn in bringing the round ligament through the broad.

Gilliam's Operation and its Modification by Montgomery.—In the Gilliam operation, the uterus is suspended in a horizontal position, rather than in the normal position of anteflexion, so that the intra-abdominal force does not come fully on the posterior uterus wall, as it should to preserve its forward position. It also leaves a space between the parietal peritoneum and the ligament, where an intestinal coil might get caught. Montgomery's modification does away with these objections to a great extent, and is a very excellent operation, but I had an accident with it in one of my earlier cases, which rather damped my ardour. I accidentally wounded the deep, epigastric vessels; the result was not discovered for some days after the operation, when a hæmatoma formed in the pelvis, which became infected and caused extensive suppuration. Possibly, I was unlucky, as many of my freinds, who use this operation extensively, assure me they have never met with this accident. Still, I have examined a number of bodies in the Anatomical School, and have found that the epigastric vessels alter very considerably in their course in different subjects. Both Professor Watson and Professor Kellaway assure me that the danger of wounding these vessels in the Montgomery operation must be a real one. I need hardly add that no operation for retrodisplacement is complete without a thorough curettage of the uterus, and, when necessary, a repair of the pelvic floor and repair of the cervix.

(c) Prolapse.

As I have already pointed out, the main feature in this condition is the laceration and stretching of the perineum and the resulting prolapse of the anterior and posterior vaginal walls, with hernia of the bladder and rectum. An anterior colporrhaphy, with repair of the perineum, is the first step to cure this condition. This will be sufficient if the uterus is not low down, but if the uterus is low in the vagina, it must in some way be suspended to keep it from pressing on and stretching the newly-formed perineum.

There are three classes of cases requiring treatment for this condition: (*a*) Patients requiring treatment during their child-bearing period. In these cases amputation of the cervix, if elongated, with perineorrhaphy and some operation for shortening the round ligament, is required. (*b*) In women over 45 years of age, and unlikely to bear children, the cystocle is generally the most marked symptom. This is best treated by the operation of Wertheim, in which the bladder is separated from the vagina and uterus, the uterus is then anteflexed and fixed between the vagina and bladder, the cervix being turned upward and the fundus downward and forward. Wertheim's operation keeps the whole structure high in the pelvis and off the pelvic floor, the bladder is fixed to the fundus and the cystocle is thus remedied. In the alternative, after repair of the perineum, the uterus can be fixed to the abdominal wall, either by its ligaments or by ventro-fixation. Direct fixation to the abdominal wall has many disadvantages in retrodisplacement and prolapse in child-bearing women, but in women after the menopause it is an advantage to ventro-suspend the uterus, as you make use of that organ to pull up the vaginal wall and the pelvic floor. In these cases, I usually suspend the uterus by passing a ligature round the round ligament as close as I can get to the cornu, and fixing it through the rectus muscle, or by Richardson's method, in which the round ligament is divided in its centre, the distal cut end is fixed to the back of the uterus, and the proximal end is brought through the rectus. (*c*) In women over 60, where the uterus is atrophic. In these cases it is better to remove the uterus by vaginal hysterectomy, if there is complete prolapse. After the removal of uterus, the round and broad ligaments can be fixed together at the roof of the vagina, and the anterior and posterior vaginal walls fixed to them, so as to draw these up. This can be supplemented by a somewhat exaggerated perineorrhaphy.

UTERINE DISPLACEMENTS.

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In studying displacements of the uterus, one must remember that its long axis is normally directed forwards; also, that the axis of the uterus and the axis of the cervix together form an obtuse angle facing the front. Any departure from this condition constitutes a malposition of the uterine body or of the cervix, or of both. The displacement may be slight or very pronounced. It may be forward, lateral, backward or downward.

Pathological anteflexion of the uterus is usually congenital, although the acquired form occasionally occurs after peritonitis and cellulitis. A condition of anteposition is sometimes found where the uterus is pushed bodily forward, as by collec-

tions of fluid, or tumours of any sort which occupy the pouch of Douglas.

In a fair proportion of the cases of pathological anteflexion there is excessive flexion of the uterine body, combined with shortening of the anterior vaginal wall, together with a puerile condition of the cervix—really a congenital condition.

The chief symptoms of anteflexion are dysmenorrhœa and sterility. The dysmenorrhœa is presumed to be caused by the narrowness of the canal, and either from imperfect development, or from contraction at the point of flexion. In some cases the pain is undoubtedly a neurosis. In others it is associated with inflammatory trouble in the uterine wall or endometrium. The sterility may be due to an obstruction in the ill-developed canal, either at the external os or at the point of flexion, or to an accompanying endometritis.

In the treatment of antedeviations it is better at first to try general measures, as life in the open-air, and participation in exercises and games likely to influence the necessary physical development. Tonics such as Easton syrup. For the pain in the immediate attack, saline catharties, hot sitz-baths, or hot rectal injections may be used, as may be phenacetin alone, or in combination with hyoscyamus or codeine. If the pain is very severe *tinct. opii* or morphine and gelsenium (min. x) four times a day for several days before the flow, will often prove efficacious. When these means fail the uterus should be dilated and straightened, and packed with iodoform gauze. Daily boracic douches should be used. The packing should be left in for four or five days, unless the temperature rises. Where there is exaggerated antiflexion and obstructive dysmenorrhœa, after dilatation, the wearing of a Duke's tube, or some mechanical dilator and support, with daily cleansing of the vagina, will bring relief. During the last few years, in addition to the dilatation and straightening one has opened the abdomen, and by means of a round ligament operation, pulled up the flexed fundus, and maintained it in a corrected position. This operation has been attended with gratifying success in these distressing cases.

Lateral displacements of the uterus are generally caused by inflammatory troubles, or by injuries, and occasionally by tumours. The treatment resolves itself into the removal of the cause, and then if necessary some round ligament operation, or suspension may be carried out.

Retropositions are much more frequently met with than the other varieties of displacement. Their usual symptoms are backache, "bearing down" or pressure, bowel discomfort, urinary irregularities, menorrhagia, and reflex nerve disturbances. These symptoms are much more pronounced if the retrodeviation is accompanied by descent or prolapse. Indeed, at times, all the symptoms seem to be caused by the descent. Thus one may replace a uterus, insert a pessary that elevates the womb, and later part of the uterine body may topple backwards over the upper border of the pessary, and yet the patient be quite comfortable. In many of these cases of retroposition and slight descent the patient can be made quite comfortable by the replacement of the womb, and the introduction of a properly fitting pessary. In many of these patients the use of the pessary will have to be continued, or the trouble will recur. In a small proportion, the pessary may be removed in three to six months' time, and the uterine body will remain in its corrected position, and the patient be cured. This is more especially the case in puerperal patients if the treatment be started early. In fact, in the majority of these cases, if the uterus be replaced early, and supported, the uterine wall will regain its tone, the involution proceed satisfactorily, the ligaments contract and retract, and fulfil their normal function again. An examination should be made in puerperal cases about four weeks after the birth of the baby, and if there is any tendency to malposition of the womb it should be corrected and supported by a suitable pessary.

There are instances in which pessaries are contraindicated, as in inflammatory conditions of the adnexa, in adhesions of the uterus or adnexa, in tumours of the uterus, in cases where there is much relaxation of the perineal shelf, and where there is much laceration of the sacral segment of the pelvic floor. In single girls, pessaries are often inadvisable on account of the difficulty of introduction, and because when introduced they frequently do not give satisfactory relief. Again, in single girls, the local treatment is apt to cause a mental state, or the development of a psychosis, which is eminently undesirable.

On the other hand, in persons above the childbearing period, one should always urge an operation in preference to a pessary; also in persons who are not likely to attend to the vaginal hygiene while wearing a pessary; and in cases where a pessary does not give complete relief, or does not cure a patient; also in relaxation and tearing of the pelvic support and in inflammatory conditions. It is also better to operate where a person has laborious duties to attend to.

In these varied cases the operation will frequently have to be of a combined nature. No one operation may be sufficient to cure the patient. Not only may there be the retrodeviation, but there may be descent. Consequently, the operation must aim at curing the descent as well as the retroposition, or else the symptoms will not be relieved. Again, if there be a want of perineal support, and it be not attended to, the operation will almost certainly fail, and there will be the disappointing return of the signs and symptoms of the previous trouble. If necessary there must be dilatation, cleansing of the uterus, cervical repair, occasional cervical amputation, narrowing of the anterior vaginal wall, partial separation and pushing upwards of the bladder, and repair of the perineum, bringing the fascial and muscular planes properly together again. It will also be necessary to open the abdomen, tighten up the ligaments of the uterus, and keep the uterine body in its corrected position.

In planning an operation for the relief and cure of retroposition, one should first consider whether the patient is likely to become pregnant again. If such a possibility exists then one has to arrange the operation in such a manner that the proper

and regular expansion of the uterine body upwards, forward and laterally may not be prevented. In some instances I have seen the uterus so fixed either by its wall, or by its ligaments, that when pregnancy ensued it was quite unable to expand properly, and an early mishap has resulted. In a few cases I have found the posterior uterine well dilated, and very markedly sacculated, while the upper and anterior walls developed to a very considerable degree. These cases generally end in the expulsion of the fœtus at about the third to the fifth months after causing the unfortunate owners much distress and suffering. Again, pregnancy may go to term in some of these cases, and then there ensues a very delayed labour in consequence of the uterine muscle inside being unable to direct the force in the proper pelvic axis.

With increased experience and better technique these disabilities and imperfections can be avoided. If a person is likely to become pregnant, do not fix the uterine body in any way, and also leave her plenty of the proximal end of the round ligaments to stretch and develop as pregnancy advances. A very good operation for this class of case is one described in the *British Medical Journal* some years ago. After opening the abdomen in the suprapubic region, catch hold of the round ligament 1½ to 2 inches from the cornu with a pair of forceps. Then push the end of another pair of forceps under the transverse fascia, and in front of the rectus muscle to near its external border. In the next place dip the point through the rectus, posterior rectal sheath and peritoneum. Catch hold of the round ligament where held by the first pair of forceps, which are released, and pull the ligament gently back with the second forceps. Then fix the tip of the reflected ligament to the under surface of the prerectal sheath by two chromic-gut stitches. Carry out a similar procedure with the other round ligament. Now see that no omentum has been carried through the peritoneum with the round ligament on either side, and that the intestines are free, then close the abdominal wound in layers. It is well before pulling the round ligaments through the peritoneum to decide on a point in the abdominal wall at which the uterine descent will be cured, and yet the uterine body lie comfortably without any undue strain on its ligaments. This forethought will add much to the success of the operation and to the after comfort of the patient.

The advantage of this operation is that the uterus swings by the strongest part of the round ligament, viz., the proximal part. Another consideration is that there are no intraperitoneal stitches, and, most important of all, that it is almost always successful in its results, and there is an almost complete absence of recurrence. I only remember two such cases in a considerable number of operations.

In some cases the ligaments are too short, or the uterus cannot be brought upwards and forewards sufficiently to perform this operation successfully. The ligaments may then be sewn to the peritoneum from the internal ring for 1½ to 2 inches toward the middle line on either side with chromic-gut. On the other hand, one of the other operations may be done, such as a Wyllie, Mann or Dudley, on the round ligaments, or a ventro-suspension, or ventro-fixation if there is no fear of subsequent pregnancy. But these operative measures are all inferior to the above-described procedure.

In patients with complete prolapse, and with no further infant expectation, a Gilliam's operation may give a better and firmer result.

Baldy's operation, though a good one for retro-positions, does not always cure the descent when this is a complicating feature. More especially is this so when there is a large subinvoluted uterus to deal with. In Baldy's operation again the weight and drag is on the weak part of the round ligament, where it enters the internal ring. The chromic stitches are also intraperitoneal, and occasionally cause trouble.

It may be objected of Gilliam's and the allied operations that they leave three potential pouches in the lower abdomen, into any of which the intestines may insinuate, and cause intestinal obstruction. This is so, but in some hundreds of cases I have been fortunate enough never to have seen any such accident supervene.

Reviews.

TUBERCULOSIS.

With the discovery of the tubercle bacillus by Koch in 1882, it appeared as if the tuberculosis problem had been solved. The unity of phthisis had been established, and its essential cause had at last been revealed. But the progress of years and the experience of physicians and sanitarians since then has shown that we are still far from the full solution of the problems presented for our investigation by the life history and activity of the tubercle bacillus. In a recently published volume,[1] Dr. Arthur Ransome, of Manchester, England, has brought together a number of papers which he has written at intervals for many years past. He states that he has been engaged in fighting against consumption for the last fifty years, a long period, which has given him ample opportunity of observing the changes which had come over the scientific attitude towards pulmonary consumption, and which were the necessary result of the newer discoveries in the bacteriology of the disease.

The recognition of a micro-organism as the chief or main cause of a morbid condition is only a small part of the ætiology of a disease, and it is the failure to recognize the important variations in the epidemiological features of epidemic or endemic disease that so often leads us into difficulties. One of the chief virtues of this collection of papers is the emphasis which, throughout them, is laid on the accessory causes of pulmonary consumption. Dr. Ransome points out that besides the infecting organism and the receptivity of the human soil for the seed of this disease, there are other most important factors at work. He notes the variation in the occurrence of cases of this disease in different parts of the city and country, and shows that this difference depends largely upon sanitary conditions; that on a wet sub-soil, with damp, ill-ventilated houses, with deficient sunlight and fresh air, we find special hot-beds for the development of tubercular disease. His experiments have proved that the infection of consumption may remain not only undiminished, but even intensified in certain insanitary houses, and that tuberculous sputum can retain its infectivity for several weeks in a damp, ill-ventilated

[1] A Campaign against Consumption: A Collection of Papers relating to Tuberculosis, by Arthur Ransome, M.D., F.R.C.S., F.R.S., Consulting Physician to the Manchester Hospital for Consumption, etc., 1915. Cambridge: At the University Press; Crown 8vo., pp. 263. Price, 10s. 6d.

house, while an exposure of similar sputum to bright sunlight and fresh air for a comparatively short time will render it non-pathogenic.

No doubt very much has been accomplished in the crusade against consumption by attention to the various sources of infection, and by the attempts to improve the general sanitation of the slum areas in the large cities, but we are still far from having gained anything more than a partial victory over tuberculosis. In Australia, we do not have the dark, damp, badly-ventilated and badly-drained slums like those in the cities of the old world, though some of the slum areas in our cities are nothing to be proud of. Still, in this country, we have a very high death-rate from tuberculosis, in spite of bright sunshine and fresh air, sanatoria and tuberculin; and the problems of the prevention and eradication of tuberculosis in Australia still await solution. We venture to think that a study of this interesting and inspiring volume will do much to help on the day of victory over tuberculosis, by stimulating the work of physicians and sanitarians in this country.

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University Intelligence.

UNIVERSITY OF WESTERN AUSTRALIA.

At a meeting of the Senate of the University of Western Australia, held in June, it was resolved:—

> That this Senate deeply regrets the death of the Registrar, Captain Townshend, who was killed in action at the Dardanelles on May 10, 1915, and feels that the University has lost, almost at the outset of his career, a man who would have been of great service, both to the University and to the State, and offers its sincere sympathy to the relatives of Captain Townshend.

It was further resolved that the Vice-Chancellor's term of office be extended for a further three months from July 21, 1915.

Various designs had been received for the laying out of the University grounds. It was determined that the adjudication be proceeded with.

Professor Woolnough was appointed Dean of the Faculty of Science for the year 1915-16. It was determined that the following notice dealing with students proceeding to the front be posted in the University building:—

> The University proposes to grant certain concessions to students enlisting for active service with the troops. All students on active service will be granted exemption from further attendance at the classes qualifying for their next annual examination in their degree course. As far as possible, special examinations will be held at intervals of not less than six months, to facilitate such students proceeding to higher courses. Students who will proceed to the senior course in any subject may also be granted exemption from the examination in the junior course in that subject, providing that the student's work in that subject has been so far of good quality. Students who are thinking of volunteering for active service are invited to make inquiries as to what exemption could be granted in their individual cases.

Mr. E. F. E. Suddard was appointed a member of the Professorial Board. Leave of absence for the purpose of proceeding to the front was granted to Mr. M. Aurousseau (Lecturer in Geology) and Mr. W. G. Townsend (Assistant in the Department of Mining and Engineering).

It was resolved that those who had been admitted to *ad eundem* degrees should be deemed to have had the respective degrees conferred on them.

The degrees ceremony will be held in April of each year.

On the advice of the Education Committee, it was resolved that the University hold a competitive examination for clerkships. This suggestion had been made by the local branch of the Royal Mint.

It was further determined that the proposed amended regulations for public examination be adopted; that a test in free composition be substituted for the oral test in country districts, and be made optional for the metropolitan district (this has reference to the examination on modern languages for the school certificate examination); and, lastly, that the subjects of agriculture, music and drawing be included in the syllabus for the school certificate examination for 1916.

UNIVERSITY OF MELBOURNE.

A meeting of students of the Melbourne University was held on July 10, 1915, under the presidency of Professor Masson. The object of the meeting was to consider the immediate organization of the resources of the University. Professor Masson pointed out that the University had yielded one undergraduate out of every four to the war. Two-thirds of the students of some of the universities had gone to the front, and there were individual colleges at Oxford and Cambridge where between 80% and 90% of the men had volunteered. He considered that the University should make a great effort to play its full part in the enlisting movement.

Sir William Irving, in the course of a stirring speech, pointed out that no place was as fit to start organizing as the Melbourne University. The work should be begun at once, and delay should not be brooked. He dreaded the prejudice against willing workers not trained in official routine. He was more afraid of red tape than of gunpowder, and begged them to throw away routine and red tape.

Dr. Alan Newton was able to demonstrate the need for greater medical assistance at the Dardanelles. On one vessel there were 400 wounded men. The staff looking after these men consisted of five doctors, eight nurses, and twelve orderlies. At the Melbourne Hospital there were 370 patients, and the staff consisted of 50 doctors, 100 nurses, and 200 attendants. The meeting resolved to proceed with the organization of the University, and informed Sir William Irving that the resources of the University, its staff, and its students were at the disposal of the Commonwealth.

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BRISBANE GENERAL HOSPITAL.

At a meeting of the Brisbane General Hospital Committee, held on July 7, 1915, it was decided to appeal to the members of the honorary medical staff to ask them to assist the institution to the utmost of their power. The resident staff of the hospital has been depleted to a serious extent, and the members remaining are not sufficiently numerous to carry out the work in an adequate manner. It is hoped that, with the voluntary assistance of the honorary staff, this difficulty may be overcome.

THE QUEENSTOWN HOSPITAL, TASMANIA.

At a meeting of the Hospital Board of Management, held on July 9, 1915, the visiting committee called attention to the overcrowded state of the Queenstown Hospital. It appears that additions are being made to the hospital. In order to overcome the difficulty arising from the overcrowding, it was decided that the Board should allot to each medical practitioner a certain number of beds. The number will be determined according to the number of patients on each doctor's list. When the alterations are completed, it is proposed to set aside not less than two beds in each ward for emergency cases.

COTTAGE HOMES OF SOUTH AUSTRALIA.

The Committee of the Cottage Homes, Incorporated, of South Australia, have issued their 43rd annual report, with a balance sheet for the year ending March 31, 1915.

From the report it appears that 92 homes were in constant occupation, and that the inmates numbered 108. More than 30 persons were waiting to enter the homes. Through the generosity of Mrs. William Milne, the Committee has received £1,000 for the purpose of erecting new homes for the aged and infirm poor and widows. During the course of the year five inmates died, and a few others left the homes. Their places were immediately taken up by those on the waiting list. The subscriptions for the year amounted to £222 14s., and, with the balance brought forward and small amounts from two funds, the total of £518 13s. 7d. was available for the year's expenses. A cash balance of £184 was banked at the end of the year. In addition to these monies, various sums were expended out of interest on invested money for the upkeep of the various homes.

The Medical Journal of Australia.

SATURDAY, JULY 24, 1915.

The Treatment of Invalided Soldiers.

The Military Authority has decided to control the treatment of the returning wounded and sick soldiers for the whole period during which it is responsible for treatment. On this basis, the soldiers will be treated either in military hospitals, or in convalescent homes placed at the disposal of the Department of Defence or equipped by the Department, or in the men's own homes. In addition, some patients may be placed, "if more convenient, into a public hospital, at the expense of the Department." The number of beds under the direct control of the military authority will be 4,100 at first, and we learn that this number will be increased later. The equipment of special military hospitals is not easy and is costly, and the staffing a still more difficult matter. The public will have a right to demand that the wounded and invalided soldiers shall receive treatment not less efficient than that accorded in a public hospital. The transformation of existing buildings, or the erection of fresh ones, and their equipment with all the necessary paraphernalia of an up-to-date hospital is a question of money and a little time. With that aspect of the question we have nothing to do, and the medical practitioner who desires to deal with this matter must do so in his capacity of a citizen. The profession, however, is concerned in the proper equipment and in the suitability of the general arrangements.

The Branches of the British Medical Association have been invited to consider the scheme of the military authority, and to determine whether the proposals put forward can be worked. In other words, the medical profession must determine whether it can be organized rapidly and efficiently to guarantee that the staffs of the military hospitals and convalescent homes shall be not less competent than those of the public general hospitals. The reply to the question put by the Director-General of Medical Services must depend firstly on the opinions held as to whether the men available are experienced enough for the work to be done; secondly, on whether the machinery of the various Branches is adequate for the purpose of organization, and, thirdly, whether the proposals meet with the approval of the members. We are convinced that objections are not likely to be put forward from frivolous or petty reasons. We are equally convinced that the Association will strain every nerve to control its own members, in order that the work may be well done. The first point is one which will require very careful consideration. It must be remembered that at the present time a large number of Australia's most experienced surgeons and physicians are serving in Turkey, Egypt and in Flanders. The number of suitable men is therefore reduced, and it may be difficult to determine before a census is taken whether the supply will be sufficient.

We confess to a disappointment in regard to the treatment of men in their own homes. The necessity for placing the civilian medical practitioner under the direct control of the military authority has not been proven, and it would seem that the payment of a minimum fee for the purpose of instituting this control is open to objection. Medical services, especially if controlled by a Governmental department, have one great disadvantage as compared with individual service of a practitioner to his patient. The quality of the work is liable to suffer as a result of the fact that the practitioner is a dependant of the department. In the case of the treatment of the Australian soldiers, however, we must regard the matter from a wider aspect, and trust to the patriotism of the individual practitioner to raise him from the natural inclination to place the department before the patient. Reports have reached us that considerable friction has arisen among the medical officers of the A.A.M.C. on service in Egypt. This illustrates the danger associated with a military medical service, in which men are placed in a position of authority, often without the confidence of the mass of the profession.

In spite of these disadvantages, we conceive it to be the duty of the members to assist the Director-General to carry out his proposals and to overcome difficulties by anticipating them and making provision to meet them. Nothing under the sun is im-

possible, and, with a good will and unlimited energy, the British Medical Association should be able to institute a medical service for the Department of Defence which Australia will be proud of.

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POISONOUS GASES.

Our attention has been drawn to an annotation published in the London *Daily Telegraph* of June 9, 1915, which has been copied into a number of newspapers throughout the Empire, without any critical or intelligent analysis. The paragraph referred to is as follows:—

POISONOUS GASES.

A French Antidote.

Paris, Monday.

The Academy of Medicine has adopted the following formula for a preparation for use against poisonous gases:—

Hyposulphite of soda, one kilo; carbonate of soda crystals, 200 grammes; glycerine, 150 grammes; water, 800 grammes.—Reuter.

It is, in our opinion, not only unwise but also wholly unnecessary to mislead the public by the publication of sensational paragraphs, and no useful purpose can be served when accuracy is departed from. It may be assumed that the interpretation of this paragraph would be that some French chemist had studied the gases utilized by the enemy, and had discovered a scientific antidote to counteract the effects. In the first place, the exact composition of the gases used has not been divulged. Professor Baker, F.R.S., who was called upon to carry out the chemical investigations of Dr. Haldane's enquiry, has not been permitted to disclose the result of his analyses, but has left the public with two points of information. The first is that the gases contain chlorine and bromine, and the second is that these elements are associated or combined with some unnamed organic material. We are not told whether the combination or mixture is toxic, whether there is an unstable chemical binding, from which the halogens are liberated within the organism, or whether the toxic substance acts gradually or immediately.

In view of this reticence on the part of the authorities as to the exact nature of the gases, it is quite certain that no official announcement would be made as to the nature of the chemical substances employed to neutralize the toxic elements.

The public has been led to believe that a discovery has been made. Chlorine was discovered in 1774 by Scheele, and accurately described by Humphry Davy in 1810. Early in the 19th century it was recognized that several substances entered into direct chemical combination with the gaseous element, among which was the hyposulphite of sodium. This method of freeing an atmosphere of chlorine gas became common after the Le Blanc processes were introduced. Later, the bisulphite of sodium was more freely utilized for this purpose. The suggestions of the chemists naturally led pharmacologists to investigate the suitability of the hyposulphite of sodium as an antidote in cases of chlorine poisoning. It is difficult to ascertain to whom this idea should be attributed, but works on toxicology published in the 'eighties contain references to it. But it appears that this suggestion was not generally accepted up to the end of the century, since Kunkel pointed out in 1898 that the "obvious but not frequently suggested treatment of chlorine poisoning consists in the inhalation of a sprayed solution of hyposulphite of sodium, with a small quantity of carbonate of sodium added." The quantities used 20 years age were 2% of hyposulphite of sodium and 0.5% of sodium carbonate. The strength of the solution is much increased in the French formula, probably because the mixture is not used directly as a spraying inhalation, but rather as a chemical antagonist to act in the atmosphere.

So much for chlorine. In regard to bromine, the same immediate treatment can be employed. The suggestion has been made by Sehrwald that the vapour of pure carbolic acid should be inhaled. The basis of this suggestion is the formation of a combination called tri-bromphenol. On the other hand, the use of hyposulphite for neutralizing the vapour in atmosphere is probably the best course.

It will thus be seen that there is nothing new in the suggestion, that no new discovery has been made, and that if these loose reports gained credence, it would merely bring the Academy of Medicine into ridicule.

THE ÆTIOLOGY OF TUBERCULOSIS.

In another column of this issue will be found a review of a book consisting of lectures delivered at different times by Dr. Ransome on the tuberculosis problems. The author and the reviewer raise a very important point in connexion with this matter. No more striking example of the disadvantages of extreme specialism could be adduced than that contained in the history of the study of tuberculosis. Tersely, if crudely, put, the position might be expressed in the following manner. The pure clinician, especially in the days before Koch's great discovery, failed to appreciate the importance of the spread of the disease by direct or indirect infection, and regarded the problem rather from the point of view of the patient to be treated than from that of the community to be protected. The bacteriologist regarded the disease exclusively as a problem of the tubercle bacillus, whereas the hygienist directed his attention rigidly to the environment of the individual.

There is yet knowledge to be gained in regard to the inter-relation between the infective agent and the patient. A beginning has been made in the study of the phenomena of immunity and of anaphylaxis. An indication has been given in regard to the varied reaction of different tissues to different bacteria and their products. Pathologists are beginning to examine the symptoms of disease from the point of view of internal chemistry. But a short time ago, all the symptoms of tuberculosis were ascribed to the entotoxins of the tubercle bacillus. The existence of an endotoxin is now questioned, and the possibility is considered whether the so-called endotoxin is not a product of the patient's own tissues, and whether the production of reaction substances does not play a large part in the protection against infection, and in the determination of acute or chronic disease. It is significant that sanitary conditions of the home, good feeding, air and sunlight are supposed to favour spontaneous cure. But we are reminded that tuberculosis is rampant in Australia, where prosperity up to the present and ideal climatic conditions have rendered all these four factors more common than in the old country. The meaning of these every-day observations is that bacilli, dirt, overcrowding, alcoholism, want of fresh air and sunshine, other debilitating diseases and family predisposition are all factors in the ætiology, but do not constitute the whole causation of the disease. No greater error can be made than to regard the bacterium of a disease as the determining factor. In the case of tuberculosis, the possibility of infection is present with every individual, and yet only about 8% of the population die of this disease. The personal factors are of greater importance than is usually recognized, although it is impossible to define the nature of all of them. The future may disclose changes in the power of the leucocytes to produce immune substances for the protection of body against the development of tuberculosis; tissue immunity may prove to be active in warding off an attack, and we may have to become more familiar with the chemical interchanges between parasites and the soil on which they subsist before the problem of natural and acquired immunity and predisposition to disease can be properly understood. It is therefore to physiology, physiological chemistry and bio-chemistry that we must turn for progress in the knowledge of the ætiology of tuberculosis.

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THE TEMPERATURE OF ECHIDNA ACULEATA.

The *Echidna*, or Australian porcupine, is an air-breathing vertebrate, with warm blood and with an epidermal covering in the form of spines and coarse hairs. The skull has two condyles for connexion with the atlas, while the lower jaw articulates with the skull in the squamosal region without the intermediation of a separate quadrate element. It is thus undoubtedly a mammal. This animal is, however, oviparous, possesses mammary glands without teats, and exhibits many other characters which are regarded as indicating reptilian affinities. Zoologists, therefore, have placed it, together with the duckbill, *Ornithorhynchus*, in a special class, and have considered it as a very primitive type of mammal. It has been supposed that the intermediate character could be further substantiated by a study of the physiological side of the animal's life. The observations which have been made on its temperature, have been interpreted as justifying this supposition. The first investigation of this animal's temperature seems to be that of the Russian naturalist, Baron de Miklouho-Maclay, in Brisbane, during 1879. He noted temperatures between 26° and 28° C., which are remarkedly low temperatures for a mammal. From 1879 to 1902 a few random observations of the temperature of echidna were recorded. In 1902, Dr. C. J. Martin published the results of a series of experiments, through which he sought to show conclusively the dependence of the temperature of echidna upon the external temperature. He held the opinion that the control of temperature possessed by echidna was less than that possessed by the higher mammals. This diminished control was regarded as forming a physiological parallel to the primitive anatomical features of the animal.

The actual fact observed by Dr. Martin was that the echidna was unable to adjust its temperature quickly when the animal was suddenly cooled to a low temperature, 5° C. When the external temperature was raised from 5° to 35° C., *i.e.*, a rise of 30° C., in the course of six or seven hours, the temperature of the animal rose from 25.5° to 35.5° C., *i.e.*, about 10° C., in the same time. From these experiments it was concluded that, as regards the regulation of its temperature, echidna lay intermediate between reptiles and mammals, and was the lowest on the scale of warm-blooded animals. But it must be noted that under the unnatural conditions of such large and rapid variations of the external temperature, Dr. Martin's own experiments show that the temperature of higher mammals exhibits a dependence on the external temperature, which is much greater than under natural conditions, and indeed, is quite comparable with that displayed by echidna. When, for instance, the temperature of the surroundings of a rabbit was lowered from 40° to 5° C., *i.e.*, about 35° C., in the course of six hours, the tem-

perature of the rabbit fell in the same time from 41.6° to 37.5° C., *i.e.*, about 4° C., or nearly half the variation shown by echidna.

The total number of observations of the temperature of echidna which had been made up to the present was only about 60, including those made under experimental conditions. Recently, Halcro Wardlaw[1] has made a series of over 800 observations of the temperatures of animals which were not subjected to any arbitrary experimental variations. As a result of this large number of observations, he has found that, although echidna hibernates intermittently in the winter, and during the periods of hibernation behaves like a cold-blooded animal, as do all hibernants, its temperature outside of the periods of hibernation remains practically as constant as that of other mammals. Although the levels between which the temperature is maintained (30° to 33° C.) are considerably lower than those of other mammals, there is no evidence of a dependence of the bodily temperature on the temperature of the surroundings. Echidna behaves as a typical warm-blooded animal, and such variations of its temperature as occur are of the nature of the regular diurnal variations of the human body-temperature, and bear no relation to the variations of the external temperature.

THE CASE OF DR. SCHLINK.

Mr. Justice Rich, whose appointment as Royal Commissioner to enquire into the charges made by Mr. Orchard, M.H.R., and published in *Hansard* was announced in *The Medical Journal of Australia* last week, opened his enquiry on July 14, 1915.

On July 17, Dr. Schlink gave evidence on oath, and was subjected to cross-examination by Mr. Innes, who is associated with Mr. Orchard. Mr. Innes stated that a misunderstanding had arisen in the drawing up of the précis of Mr. Orchard's charges. In clause B (5) the words: "German doctor of German sympathies" appear. Mr. Innes said that Dr. Schlink was not charged with having German sympathies, and it was not proposed to prove this. The charge made in the House was that Dr. Schlink was a doctor of German name and parentage, who was believed by some of the men to have German sympathies.

It is not proposed to publish that portion of the evidence which deals with Dr. Schlink until the Royal Commissioner has issued his report. For the present, it is sufficient to summarize the evidence given by Dr. Schlink at the examination-in-chief by the statement that he denied categorically the truth of the charges made against him. Mr. Innes exhibited skill in his cross-examination, and succeeded in arousing Dr. Schlink's indignation. After suggesting that Dr. Schlink had been guilty of uttering disloyal sentiments, he added in the most naïve manner possible that he did not suggest that the questions were founded on fact. Dr. Schlink asked for the name of the informant, and Mr. Innes replied "My information in gathered from Senator Millen's speech."

[1] Proceedings of the Linnean Society of New South Wales, XL., Pt. II., 1915.

PRISONERS' CAMPS IN GERMANY.

The following interesting information is culled from an article printed in the London *Times* (weekly edition) of June 11, 1915. The article is contributed by a neutral correspondent. There are 247 camps scattered throughout the German Empire, as well as the camp and other hospitals where wounded and sick prisoners are being treated. In 55 of the camps, the number of prisoners varies between 10,000 and 20,000 each. Many of the prisoners are at work outside the camps, in farms and in factories. It is stated that the men prefer to be at work, partly because it relieves the depressing monotony of the camp, and partly because the fare is better. They earn a little money when at work. The amount paid is stated to be 6d. *per diem* for farm and 1s. 6d. *per diem* for industrial labour.

In the hospital camps, where the prisoners serve as warders for their fellow-countrymen, the impressions were good. Enteric fever was present in some camps, especially in the neighbourhood of Cassel, but the most stringent precautions were being taken. Tuberculosis and pneumonia appear to be common among the French soldiers.

The food served is apparently not very dainty. On the other hand, it is said that each man receives a diet equivalent to about 2,700 calories a day. The menu consists of bread, potatoes, pork, vegetables and margarine. The bread is served in solid form, while the rest is boiled into a thick soup, which is served at all meals. The writer of the article states that, thanks to the representations of the American Ambassador, the average amount of food has been slightly increased since his visit. He says that the food cost the State 7.3d. for each man *per diem*. On the other hand, prisoners can buy extra food, as well as cigars and tobacco. It is said that the complaints came especially from the British, and were connected with the food. The prisoners are allowed to amuse themselves in various ways. It is said that after the prisoners have reached the camps and have learned to comply with the regulations, they are not treated badly.

BIRTHDAY HONOURS.

The full list of recipients of honours on the occasion of His Majesty's birthday is now to hand. The following members of the medical profession have been selected for distinctions of various kinds:—

Dr. James Macknezie, M.D., LL.D., M.R.C.P. (Lond.), has received the distinction of knighthood. Sir James Mackenzie's distinguished career as a physician and original investigator is so well known that no special mention need be made to either. As an authority on the heart, Sir James stands pre-eminent, and much of the recent advances in Great Britain on this branch of medicine is due to his work or to the influence of his teaching.

Surgeon-General Thomas Martin Corker, M.D., K.H.P., has been created a Companion of the Most Honourable Order of the Bath.

Dr. Arthur William Garrard Bagshawe, the well-known Director of the Tropical Diseases Bureau (formerly the Sleeping Sickness Bureau) of the Imperial Institute, and Editor of the *Tropical Diseases Bulletin*, has been made a C.M.G. Dr. Bagshawe has done much to advance medical knowledge in connexion with tropical medicine, and has long been regarded as an authority in London on this branch of medicine.

Major E. J. O'Neill, M.B., F.R.C.S., of the New Zealand Army Medical Corps, has been awarded the Distinguished Service Order. The same distinction has been awarded to Captain A. G. Butler, of Brisbane, A.A.M.C., attached to the 9th Australian Infantry Battalion (Queensland). (See *The Medical Journal of Australia*, June 19, 1915, p. 583).

Lieutenant-Colonel Cecil Charles Stewart Barry, I.M.S., Medical Superintendent of the General Hospital at Rangoon, Burma, has been awarded the C.I.E.

Dr. Thomas Franklin Pedley, M.D., V.D., of Rangoon, Burma, has received the distinction of the "Kaisar-I-Hind Medal for Public Service in India." Dr. Pedley has served in the rank of Lieutenant-Colonel with the Rangoon Port Defence Volunteers.

The Imperial Service Order has been awarded to Rai Chuni Lal Basu Bahadur, M.B., F.C.S., Government Exam-

iner in Chemistry and Teacher of Physics and Chemistry at the Campbell Medical School, and Fellow of the Calcutta University. The same Order has been granted to James Edward Aquart Ferguson, M.B., Government Medical Officer at British Guiana.

THE PATHOLOGICAL CLUB OF SYDNEY.

A meeting of the Pathological Club of Sydney was held on July 14, 1915, in the Bacteriological Laboratory of the Department of Public Health. Eleven members were present. The meeting was chiefly occupied with private business, and eight new members were elected. Dr. H. G. Chapman presided.

Dr. J. B. Cleland exhibited two rats from a steamer which had come from Java. They possessed small ears and long tails, and did not seem to resemble typical specimens of *Mus rattus* or *Mus decumanus*. He showed some sections of the livers of Australian honey-eaters, which revealed fatty infiltration. The livers of all the Australian honey-eaters had been noted to be of a pale yellow colour. He suggested that the fat was derived from the large amount of carbohydrate in the diet. Dr. Cleland further exhibited some cysts from the axilla, with cheesy or milky contents. Microscopical sections showed the presence of tubular acini imbedded in a fibrous stroma. These structures appeared to be dilated sweat glands, and the hypothesis was advanced that these cysts represented accessory mammary glands. In the next place, he showed a specimen of *Sparganum mansoni*, obtained from a man in New South Wales. This was the third record from New South Wales. The parasite was obtained from the neighbourhood of the knee. An abscess apparently pointed and burst. The parasite was withdrawn from the opening on the surface. Microscopical examination led to its recognition. The name, *Sparganum mansoni*, was given by Stiles to the larval form of an unknown tape-worm, belonging to the family of the *Dibothriocephalidae*. It was first noted in 1883, during the post-mortem examination of a Chinese in Amoy. A number of specimens were found under the peritoneum, in the neighbourhood of the kidneys and iliac fossæ, and a free specimen in the pleural cavity. They were long, ribbon-shaped parasites, with feeble movements. No differentiated head, no definite structure, and no evidence of sexual organs could be discovered. There was no attempt at segmentation. Leuchart suggested that the host of this parasite is some carnivorous animal, closely associated with man. Sonsino found a similar parasite in an Egyptian jackal.

Three specimens of malignant growths were shown. Dr. Cleland was inclined to regard them as sarcomata. The first was a growth from the ovary, composed of elongated cells, separated by a scanty stroma, in which numerous capillaries were present. The second tumour was an encapsuled growth from the arm, in which columns of cells were separated by strands of fibrous tissue. The third was a rounded, firm, but not fibrous tumour, from the cheek. It showed large, rounded cells, containing large nuclei, separated by a small amount of fibrous stroma. The capillaries possessed walls in intimate contact with the large rounded cells.

Dr. A. Palmer showed the genital organs of a case of puerperal septicæmia, due to streptococcal infection. The heart, with numerous recently formed vegetations on the valves, and the kidneys, revealing infarcts, were sent for demonstration. Dr. Palmer also exhibited an enlarged pituitary gland from a case showing some signs of gigantism.

Dr. Ludowici exhibited a uterus containing a fibroid tumour.

VICTORIAN INEBRIATE INSTITUTIONS.

Dr. W. Ernest Jones, Inspector-General of the Insane, has presented his Annual Report for 1914 on Inebriate Institutions to both Houses of Parliament in Victoria. He deals with the Government Inebriate Institution for Men at Lara, and "Brightside," the home for women under the control of the Salvation Army. The outbreak of war has affected these institutions, both directly and indirectly; directly since 42 men, previous patients of Lara, have gone for service to the front; that is to say, 6% of the total number of individuals admitted since its inception; indirectly, since the war has drawn attention to the industrial inefficiency caused by excessive drinking in certain countries. Dr. Jones again emphasizes his opinion that these institutions cater for the needs of the more recoverable class and not for the irreclaimable and criminal drunkard. Such institutions can only admit these latter cases to the detriment of the better or recoverable class. Separate accommodation should be provided for the irreclaimable patients. He also draws attention to the habit that has grown up of drinking in the early part of the day. He is of opinion that no one requires alcohol before his mid-day meal, and recommends that if alcohol be taken, it should be taken with luncheon or dinner. He suggests that the sale of alcohol in hotels, restaurants and clubs should be forbidden before noon. He considers that it would be a distinct advantage if alcohol were only obtainable where food is served. He fails to see any reason why wine-shops and public-houses, which only cater for their bar trade, should be permitted to exist. He thinks that the Legislature might prescribe the percentage of alcohol in various wines, beers and spirits, and might prevent the sale of immature liquors. In this connexion, the tables on the kind of inebriant used by patients are instructive. Since its inception in 1907, Lara has received 841 alcoholic patients, of whom 300 were addicted to spirits, 200 to beer, 200 to spirits and beer, 100 to wines and spirits, and 5 to wine alone. During the year, 158 patients were admitted to Lara, 115 on voluntary orders, 11 on compulsory orders, and 32 without orders. More than half of the patients came in for six months, but it rarely happened that it was found necessary to detain them for that length of time. The average length of stay was 2⅔ months, which may be compared with the average length of stay at "Brightside," which was five months; a comparison pointing strongly to the different effects of alcohol on the two sexes. Of the 158 patients admitted, 51 are doing well, 24 are not improved, 14 are improved, and 37 are still in the institution. Out of 841 patients admitted to Lara, 284 have done well, amounting to one-third of the cases, while 204 patients, or one-quarter, have not improved. There have been no cases of serious illness, neither has there been a death in Lara during the year.

During the year, 45 patients were admitted to the "Brightside" Sanatorium. As there were 16 patients in the institution at the beginning of the year, 61 cases were treated during the year. The patients discharged numbered 37, and 24 remained in the sanatorium. Of the patients released, 14 are at present total abstainers, 6 show much improvement, and 11 have relapsed. The general health has been good.

The Matron visited Europe, where she made inquiries into the methods used in the most successful "homes." On her return, it was decided to receive only patients admitted for 12 months' treatment, and to institute a vegetarian diet. Dr. Jones is of opinion that this experiment will be successful, judging by the results of the first six months, but he does not think that there will be any economy from dispensing with the use of meat, as it is necessary to employ a wide range of foods to prevent monotony. He congratulates the Salvation Army on the enterprise and spirit with which they are conducting this institution. Reports by the visiting medical officers are appended to the Inspector's report.

THE HEALTH DEPARTMENT OF QUEENSLAND.

The Royal Commission on the organization of the Public Services has been entrusted in recommending a recasting of many of the departments, and the suggestion is current that the Home Department will be rendered less cumbrous and complicated by the creation of an independent Health Department, which would have the control of charities and hospitals and similar duties to effect, in addition to the management of hygiene.

The University War Committee of the University of Queensland confirmed on June 28, 1915, an arrangement whereby a joint executive committee with the Brisbane Chamber of Commerce and the Queensland Chamber of Manufacturers should be set up. Professor Gibson, Captain Richard and Mr. E. C. Barton were appointed representatives of the University. A public meeting was held on July 19, 1915, at the Exhibition Hall, Brisbane, for the purpose of laying the position before the general public and bringing the needs of the nation to its notice.

Abstracts from Current Medical Literature.

MEDICINE.

(32) The Causes of Indigestion.

Van der Hoof (*Johns Hopkins Hosp. Bull.*, May, 1915) bases a clinical study of the causes of indigestion on 1000 consecutive cases. Only those patients whose chief complaint was attributed to some disturbance of digestion, such as "stomach trouble," dyspepsia, abdominal pain or distress, flatulence, vomiting, etc., were included. Patients complaining of other symptoms who were found, on examination, to have some intra-abdominal lesion were excluded. In order to determine the proportionate frequency of the various causes of indigestion, the author has tabulated the clinical diagnosis. A summary of this tabulation shows that appendicitis and cholecystitis are responsible for approximately 35% of the cases of chronic indigestion, peptic ulcer and neuroses for 10% each, and carcinoma involving the stomach and bowels for 5%. Ten per cent. of the cases fall into a group including chronic gastritis, visceroptosis, peritoneal adhesions, enterospasm and enterogenous toxæmia, while 25% are included in a group in which the indigestion is a reflex disturbance from affections of the kidneys, lungs, heart, eyes, blood and ductless glands, ear, central nervous system, female pelvic organs, and migraine and chronic infectious diseases. The remaining 5%, classified as miscellaneous, include such conditions as pellagra, amœbic dysentery, malaria, diseased tonsils and cyclic vomiting (in children), intestinal parasites, together with instances of diverticulitis, peritoneal tuberculosis, cancer of the pancreas and œsophagus, retro-peritoneal sarcoma, etc. In patients who had more than one lesion existing as a possible reflex cause of indigestion, only the one most likely to be responsible was tabulated. The author considers that the percentages attributed to peptic ulcer and to the neuroses are too high. Many of the ulcer cases were treated medically, and the diagnosis of gastric neurosis was often queried. He thinks that certain of these cases, if they could have been followed further, would have proved to have been instances of diseased appendices or gall-bladders, and that the true incidence of appendicitis and cholecystitis approaches 40% in the causation of chronic indigestion.

(33) The Diagnosis of Mediastinitis.

Howard (*Johns Hopkins Hosp. Bull.*, May, 1915) states that mediastinitis is rarely met with as an acute condition. Chronic mediastinitis usually follows an acute rheumatic pericarditis, but may also develop subsequent to fibrinous pleurisy, or in association with some other of the acute conditions of the chest. Occasionally it is chronic from the outset, secondary to a tuberculous focus in the mediastinal glands or in the adjacent lung. Tuberculosis is certainly a more frequent ætiological factor than has been generally recognized. Syphilis, too, has played an important rôle in a small proportion of cases. Various infections of the bony framework of the upper chest may also be responsible for a chronic indurative fibrosis of the mediastinum. The symptoms are chiefly cardiac in origin, and consist in dyspnœa, cyanosis, and dropsy. The most striking objective symptom is often a marked distension of the superficial veins of the neck, chest, and even of the face and the upper extremities. Ascites is very apt to occur before the development of a general anasarca, due to a chronic peritonitis from venous congestion, or possibly to an associated hepatic cirrhosis, as has been described. Pain behind the sternum is by no means a constant feature. Œsophageal symptoms, such as dysphagia, and tracheal symptoms, as stridor, brassy cough, etc., are rare. In addition to the ordinary physical signs associated with the presence of some cardiac lesion, such as pericarditis or endocarditis, auscultation reveals an important sign, first described by Perez. This consists of a rough, creaking, to-and-fro friction, audible by stethoscope over the manubrium when the arms are moved upwards and downwards, as in the act of artificial respiration. This sound can be readily differentiated from that heard in muscular individuals submitted to the same test, when a finer, more crepitant noise can be heard. Various abnormalities in the cardio-respiratory movements, analogous to those found in mediastinal tumour and aortic aneurysm have also been demonstrated. In marked mediastinal fibrosis, the *pulsus transversalis* or laryngeal pulse occurs, as evidenced by a marked visible pulsation in the larynx and trachea, synchronous with the heart. It is due to the increased aortic impulse, or to the intimate contact of the aorta with the tracheobronchial apparatus, brought about by the fibrous adhesions. The differential diagnosis from other conditions in the mediastinum, is not an easy matter. (1) Aneurysm of the aorta gives a localized impulse or a sac with an expansile pulsation, discernible either by palpation or by fluoroscopy. The presence of the stigmata of syphilis, or a positive Wassermann reaction, are important aids. A ringing character of the second aortic sound suggests aneurysm. All the pressure symptoms, particularly those upon the trachea, recurrent laryngeal and sympathetic nerves, may be present, while tortuosity of the superficial veins and œdema of the face and the neck are rare, though they may occur. (2) Solid tumours of the mediastinum may be suspected in an adult with a history of pain or distress in the sternum, a constant or paroxysmal or a brassy cough without sputum, an area of retrosternal dulness, dysphagia, inequality of the pupils, and evidence of venous obstruction. The absence of expansile pulsation and of the ringing character of the aortic second sound are to be noted. Korányi has found that the percussion note is normally flat over the VII. cervical vertebra, and becomes gradually more resonant from the I. to V. dorsal, while from the VI. to the IX., the note is full, clear and non-tympanitic. In cases of solid tumours of the mediastinum, whether from neoplasm or tuberculous glands, the flatness continues below the VIII. cervical vertebra, and modified resonance extends to a lower level than normal. Increased breath sounds and bronchophony may be detected in this region. (3) Abscess of the mediastinum will present less difficulty, as a history of traumatism, with dulness on light percussion over the sternum, and the presence of a fever of hectic type, will be important suggestive factors. Naturally, the treatment is largely symptomatic, though cardiolysis may be tried in selected cases.

(34) Urticaria Papulosa.

Barber (*The Practitioner*, December, 1914) takes the view that *urticeria papulosa*, like ordinary urticaria, is the response of the skin of certain individuals to various irritants, internal or external, and possibly to psychical disturbances. There is in all cases a definite underlying constitutional factor, the "exudation diathesis." An unhealthy condition of the lymphoid structures, adenoids, enlarged tonsils, etc., is frequently associated with this. Digestive disturbances are common, and are probably causal. The eruption is characteristic, and is well known. At the time of inspection there may be no urticarial wheals visible, though there is nearly always the history of their appearance at night-time. The typical lesion is the papule, yellowish-white or pinkish, the size of a hemp seed, firm to the touch, with a yellowish, minute crust, or a blood crust in the apex. The eruption may be universal. No strict rules can be laid down for diet suitable for all cases. Sometimes milk has to be curtailed, sometimes carbohydrates. He advises aperients, such as *hydrarg. cum crêta*, followed by salines, salol, and sometimes ichthyol internally. Locally a 2% beta naphthol, or a 10% menthol ointment are recommended. The importance of cool and smooth underclothing is emphasized.

NEUROLOGY.

(35) Double Frontal Brain Abscess.

Casamajor (*Journ. Nervous and Mental Disease*, April, 1915) describes the case of a man, aged 50 years, a mechanic, whose family history was negative. Between the ages of 20 and 30 he had suffered from several attacks of articular rheumatism, with heart complications. Up to about 20 years before he had drunk to excess, but for the last 15 years he had been a total abstainer. He smoked and chewed tobacco to excess. He had worked very hard at his trade during the past ten years. The exact date of his present illness could not be fixed. He first

came under observation on March 10, 1914. At that time he complained only of a slight frontal headache and of being unusually tired. The pupils were contracted, reacting slowly. The tongue was heavily coated and the breath offensive. The temperature was normal, pulse-rate 60. He appeared slightly jaundiced. On his first day in hospital he was restless, and wished to go to business; he insisted on smoking his pipe. His condition remained unchanged for four days, in spite of active purgation. On the fifth day he was quite indifferent to his surroundings and very talkative. His headache had disappeared almost entirely, and he did not complain. When left alone he talked and whistled, and was quite indifferent to the fact that he had involuntary defæcation. His pulse was slow; rectal temperature on the fifth day was 101°. The urine was deeply bile-stained; it contained a trace of albumin, but no sugar; there was a marked indican reaction, and a few hyaline casts. A differential blood count showed 79% of polynuclears. The stools were offensive and lighter in colour than normal. The pupils remained contracted and sluggish, acting equally. There was nothing abnormal about the nose or ears. The patient remained in the same state for another 24 hours, appearing indifferent when he was alone, but acting quite rationally upon being questioned. There was no paralysis, and the reflexes were normal. His temperature on the evening of the sixth day was 101° in the rectum, pulse 54, respirations 18. In the morning of the seventh day after admission he suddenly developed a chill, his rectal temperature rose to 106°, he became comatose, developed Cheyne-Stokes respiration, and died in three hours. At the autopsy, on removal of the brain, about half an ounce of foul-smelling pus escaped through the right frontal lobe. Further exploration showed a double frontal abscess, undoubtedly primary, on the right side and extending through the *corpus callosum* into the left frontal lobe. There was no pus in the ventricles, and no internal hydrocephalus. The pus found in these abscesses contained the *bacillus pyocyaneus*. The infection from this organism, according to Oppenheimer, is most often hæmatogenous, and one of the commonest of the causes of brain abscess. The meninges in this case, as well as the frontal and other sinuses, showed no evidence of involvement.

(36) Uræmic Paralysis.

Batty Shaw (*Practitioner*, March, 1915) discusses some forms of paralysis which occur in uræmic conditions. Many of these paralyses are almost certainly of toxic origin, and the toxin picks out the motor areas in some individuals, and the sensory areas in others. It is not known why the toxin should be so selective, nor why arsenic should pick out one set of nerves, lead another set, and diphtheria another, nor yet why one cerebral cortex should be singled out for attack in uræmia more than another. Various explanations have been given, such as œdema of the brain, general or localized, and thromboses, which are so minute as not to be recognizable. But of all the causes, the most easily understood is anæmia from temporary occlusion, partial or complete, of the vessels. The presence of a "pressor" body in the blood, which appears to be so often the case in uræmia, makes it easy to understand that such a body acting on the brain vessels would cause them to contract. If the arteries supplying a special area of the brain affected are small, then a moderate degree of contraction would produce a relatively greater anæmia of such parts than of other parts of the brain, and they would suffer to the exclusion of the others. Experimentally, such a possibility has been found non-existent in animals in whom the cerebral vessels have no neuro-muscular control, but it does not follow that in man there is no such control; on the contrary, a vasomotor apparatus in connexion with the cerebral vessels in man has been proved to exist, though it is somewhat imperfect. If uræmia and its various manifestations are associated with a pressor toxæmia and acidosis, then venesection and the use of alkalies by intravenous or subcutaneous injection should give the best results. That recovery may take place with rest and simple treatment is shown by the fact that a pressor toxæmia is present and can pass off spontaneously as in one of the author's patients, in whom, with the disappearance of symptoms, there was a disappearance of the high tension.

(37) Extra-Pyramidal Hemiplegia.

Gordon (*Medical Record*, December 12, 1914) describes the case of a man, aged 25, who came under his notice for left hemiplegia. At the age of 8 years he had typhoid fever, and before the temperature began to fall he had an apoplectic attack, with loss of consciousness. He had left hemiplegia, with aphasia. The aphasia lasted only a few months, but the hemiplegia persisted. He had left hemiplegia with a slight drawing of the face to the left, and the left foot kept in a state of marked contracture. There was no distinct rigidity of the different segments of the left arm or leg, as on passive movements resistance could be easily overcome. The hand was always in a state of extreme contracture. The shoulder and left arm presented involuntary movements, and associated movements were observed on the entire left side, including the face and neck, whenever a passive movement was made in any part of the left side. There was no ankle clonus, and no Babinski reflex. Sensation was normal. The author points out that the hemiplegia was undoubtedly organic, but that the absence of true paralysis, of ankle clonus, and of the Babinski reflex, together with the absence of marked contractures in the joints of the arm and leg, and of the characteristic resistance on passive movement, associated with the occasional presence of hypotonia, and associated movements pointed to a lesion outside the pyramidal tract. The author suggests that the hemiplegia might have been the result of a lesion in one *corpus striatum*.

(38) The Semeiology of Tumours of Localized Areas of the Temporal Lobe.

Mingazzini (*Rev. Neurol.*, XXII., Juillet 15, 1914) records the case of a man, aged 49 years, who developed frontal headache, incomplete lateral left hemianopsia, weakness of the left upper and lower limbs, slight paralysis of the left facial nerve and slight mental confusion. These symptoms were not sufficiently definite for the lesion to be localized. The symptoms were followed later by vomiting, vertigo, double optic neuritis, increased mental confusion, involvement of the right V., VII., and XII. nerves, weakness of the right corneal reflex, pain on percussion of the head, paralysis of the left VI. nerve, left *superior rectus* and *sphincter iridis*, partial astereognosis and slight ataxia of the cerebellar type, especially of the upper limbs. These symptoms suggested a tumour beginning in the right occipital region, spreading into the posterior half of the right temporal lobe, and pressing on the pons. At the operation, a hard mass was found in this region, but was not removed. It was found later to be a sarcoma, and occupied all the occipital lobe and the whole of the posterior half of the right temporal lobe. The author discusses the differential diagnosis of tumours of the different areas of the temporal lobes. (1) Tumours of the anterior two-thirds of the convex surface of the temporal lobe show marked general symptoms, with hemiparesis, more or less spastic, palpebral ptosis on the opposite side, and less frequently abducens paralysis, astereognosis of the opposite side, and, if the tumour be on the left side, some form of sensory aphasia or dysarthria. (2) Tumours of the posterior third of the convex surface also cause general symptoms, with hemiparesis of the opposite side. All the oculo-motor branches are involved at times, with bilateral nystagmus, tendency to conjugate deviation of the eyes, and cerebellar ataxia. A left-sided tumour always causes sensory aphasic symptoms. (3) Tumours of the posterior half of the inferior surface may cause unilateral abducens paralysis, isolated facial paralysis, contralateral palpebral ptosis, hemiparesis, and hemi-anæsthesia. Sensory aphasic symptoms may be absent, even in tumours of the left side. (4) Tumours of the anterior half of the inferior surface may produce hallucinations of smell and taste, parageusia or ageusia. The absence of olfactory hallucinations, however, does not mean that a lesion in this region can be excluded. Symptoms may also be caused by pressure of such tumours on the mid-brain, the pons or the cerebellum.

PASTEUR INSTITUTE OF CAIRO.

Through the kindness and courtesy of Lieutenant-Colonel J. B. Nash we have received the following account of the equipment of the Antirabic Institution at Cairo, and of the work conducted therein, written by the Director, Dr. Pierre de Vregille, who was for many years connected with the School of Medicine, Beyreuth, in Syria.

The Pasteur Institute of Cairo, attached to the Department of Public Hygiene, was opened on the 15th of April, 1906. It is housed in a special pavilion, containing an office, a room for the Director, a microscopical laboratory, rooms equipped for the preparation of vaccines, for injections, and for sterilization, and a department for the examination of patients. It possesses a stable for the rabbits, and the sheep furnishing the vaccines and sera, in communication with a garden. The staff consists of the director, a medical practitioner, a secretary, an assistant, and three attendants.

Until 1909 the classical method devised by Pasteur of utilizing dried spinal cords, was used for treatment. Since 1909 the method of dilutions introduced by Högyes has been employed. The spinal cords are kept for twelve days in neutral glycerine at freezing point. They are made up into emulsions of five different strengths;—

Emulsion No. 5 contains, as a single dose, a piece of spinal cord, $^1/_{15}$ centimetre long rubbed up in 5 c.cm. of physiological salt solution (9 parts per 1000), thus yielding a dilution of about 1 in 600. Egyptian rabbits rarely weigh more than 1500 gm., and 1 cm. of their spinal cord weighs about 12.5 centimetres.

Emulsion No. 4 contains $^1/_{12}$ centimetre of cord in 5 c.cm., thus giving a dilution of 1 in 500.

Emulsion No. 3 contains $^1/_{10}$ centimetre in 5 c.cm., thus making a dilution of 1 in 400.

Emulsion No. 2 contains ⅛ centimetre in 5 c.cm., *i.e.*, a dilution of 1 in 300.

Finally, emulsion No. 1 contains ⅙ centimetre of cord in 5 c.cm. of saline solution, thus yielding a dilution of 1 in 250.

These emulsions are given successively by subcutaneous injection in doses of 5 c.cm. daily for a period of 16, 18 or 21 days, according to the severity or location of the injuries. In the case of severe bites, *e.g.*, those on the head, serotherapy is employed with the vaccination, so that during the first three days of the treatment the patient receives 10 c.cm. of a mixture of equal parts of a decimal emulsion of fresh cord in water, and of the serum of a hyper-immunized sheep. The sheep are immunized by injecting the brains of sixteen rabbits which have died of rabies; nine or ten days after the last injection 500 c.cm. of blood are removed from the sheep.

The total number of persons treated at the Institute has been:—

In 1906, 437; 1907, 515; 1908, 627; 1909, 694; 1910, 658; 1911, 681; 1912, 899; 1913, 748; and in 1914, 686.

Among these persons are those who have, for various reasons, ceased treatment before its conclusion. Those who received the regular course of treatment have been:—

In 1906, 404; 1907, 464; 1908, 574; 1909, 612; 1910, 683; 1911, 560; 1912, 770; 1913, 609; and in 1914, 531.

A number of courses of treatment were interrupted owing to observations of the animals causing the wounds. Whenever a person is bitten by an animal the animal is, if possible, seized by the authorities and placed under the care of the veterinary service, which keeps the Institute informed as to the condition of the animal. When the animal is in good health after ten days the course of treatment is stopped.

The number of courses of treatment interrupted as useless have been:—

In 1906, 33; 1907, 51; 1908, 53; 1909, 82; 1910, 72; 1911, 117; 1912, 126; 1913, 138; and in 1914, 149.

These figures have increased in proportion to the increase in the number of centres of observations for animals biting people. Owing to the care of the Veterinary Corps, whenever an animal that has bitten someone has been killed, or when an animal showing symptoms of rabies has been destroyed the brain is removed, and sent to the Pasteur Institute. If the brain arrives in a satisfactory condition portions are inoculated into rabbits. The number of animals recognized by inoculation as suffering from hydrophobia has been:—

In 1907, 51; 1908, 35; 1909, 50; 1910, 94; 1911, 85; 1912, 126; 1913, 113; and in 1914, 56.

When the preservation of the brain does not allow of inoculation, as is often the case during the warm months of the year, the brain is examined for the presence of the corpuscles of Negri which have some positive diagnostic value.

The animals that have bitten people have been:—

Dogs, 4832; cats, 273; foxes, 94; wolves, 71; monkeys, 19; jackals, 5; donkeys, 19; and others, 99.

An examination of the monthly records of the number of persons bitten shows that it is during the hot months of the year, June, July, August, and September, that the greatest number of cases occur. It is not necessary to conclude from this that heat favours the onset of rabies; rather this fact must be regarded as a verification of the law, stated elsewhere, that the less favourable the climatic conditions, the more frequent are the cases of rabies.

When the cases are classified according to the provinces and areas from which the persons treated are derived it is found that the number of persons bitten is proportional to the density of the population. In other words, hydrophobia is evenly distributed throughout the different parts of Egypt.

A marked diminution in the number of persons treated in 1913 and 1914 is due to the opening of the new Institute at Beyrouth, in 1913.

After leaving the Institute the patients are kept under observation for a year by inspectors of the Department of Public Hygiene, who report regularly on their health. The number of persons under observation after one year has been:—

In 1906, 400; 1907, 458; 1908, 555; 1909, 600; 1910, 570; 1911, 547; 1912, 755; 1913, 593; and in 1914, 525.

The percentage of deaths has been:—

In 1906, 0.99%; 1907, 1.29%; 1908, 3.31%; 1909, 1.96%; 1910, 1.96%; 1911, 2.32%; 1912, 1.95%; 1913, 2.6%; and in 1914, 2.07%.

The figures must be corrected if accurate figures are desired on the success of the treatment. The immunity conferred by this treatment is not complete for twenty days after the end of the treatment. It is not necessary to count as cases of unsuccessful treatment those dying, not only during the course of treatment, but even during the three weeks which follow the end of the treatment.

The corrected figures for the death-rate are:—

In 1906, 0.49%; 1907, 0.43%; 1908, 1.04%; 1909, 0.81%; 1910, 0.68%; 1911, 0.89%; 1912, 0.52%; 1913, 0.30%; and in 1914, 1.12%.

The mean corrected death-rate at all the Institutes for the treatment of rabies is 0.42%.

Owing to the co-operation of the Pasteur Institute with the Veterinary Service, the members of the Veterinary Corps poison all the dogs in a locality on notification by the Institute of a case of rabies. It is indeed astonishing that rabies still exist in Egypt despite all these efforts. This failure to eradicate the disease is due to the configuration of the country, which is bounded along its length by deserts, into which the wolves and jackals withdraw unhindered. These animals, when infected, return to the valley and bite the dogs of the villages during the night. This occurrence is the more annoying since the passage of the virus through the wolf or jackal produces, as is well known, an increase in its virulence.

If we remember that a person bitten by a "mad" animal has on the average one chance in six of succumbing if not treated, and one chance in seven hundred of dying if treated, we can appreciate the value of an institute which has treated successfully 5000 persons, and we can be grateful to Pasteur for what he has done for humanity.

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British Medical Association News.

BELGIAN DOCTORS' RELIEF FUND.

Queensland Branch.

At a meeting of the Queensland Branch, held on July 2, 1915, it was decided that the Belgian Fund of the Branch

be closed, and that all future subscriptions be devoted to the relief of Belgian medical men in distress. In order to facilitate the transmission of money, the sums collected will be handed over to *The Medical Journal of Australia*, and will be added to the money of the New South Wales Branch for transmission to London.

The following subscriptions are acknowledged with thanks by the Treasurer of the Branch:—

	£	s.	d.
Dr. Beet, W. A., Beaudesert (July contribution)	2	2	0
„ Morgan, D. H., Brisbane (July contribution)	1	1	0
„ Page, W. A., Brisbane (June and July contributions)	2	2	0
„ Sampson, G. A., Maleny (a donation)	1	1	6
„ Voss, F. H. V., Rockhampton (July contribution)	1	1	0
Total	£7	7	6

South Australia.

The Treasurer of the South Australian Branch Fund (Dr. Alfred Lendon) announces the receipt of the following contributions for the relief of the Belgian doctors. The response to this fund has been generous, and the members of the Branch are to be congratulated on the manner in which they have contributed to the fund.

	£	s.	d.
Amount previously acknowledged	457	11	6
Dr. Boer, A. O., Streaky Bay	1	1	0
„ Evans, J. H., Brompton	2	2	0
„ Goode, A., Terowie	2	0	0
„ Gunson, J. B., Adelaide	*0	10	6
„ Holder	3	3	0
„ Lamb, W., Hummock Hill	†1	1	0
„ Magarey, Cromwell, Norwood	‡3	3	0
„ McEwin, K., Balaclava	2	2	0
„ Plummer, V. M., Adelaide	†1	1	0
„ Purves, C. W., Eudunda	†1	1	0
„ Sangster, J. I., Glenelg	†0	10	6
„ Shorney, H. F., Adelaide	*2	12	6
* „ Steele, D. M., Kooringa	2	2	0
„ Verco, J. C., Adelaide	‡5	0	0
Total	£503	1	0

* Including dinner subscription. † Third donation.
‡ Fourth donation.

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Medical Societies.

(Affiliated with the British Medical Association.)

THE NORTHERN SUBURBS MEDICAL ASSOCIATION.

A meeting of the Northern Suburbs Medical Association (New South Wales) was held at the Masonic Hall, Mosman, on July 17, 1915, Dr. W. G. C. Smith (the President) in the chair.

Mr. Barr Brown called attention to some anomalies of the Common Form of Agreement with Lodges, which he considered should receive the attention of the members. After a general discussion on the points raised had taken place, it was resolved that the Committee consider the matter and report to a subsequent meeting of the Association.

Dr. Bligh moved and Dr. Kelly seconded, and it was resolved: "That an honorarium of £10 10s. be voted to Mr. Barr Brown."

Dr. Bligh moved that the sum of ten guineas be donated to the Benevolent Fund. The motion was seconded by Dr. Kelly, and carried after Dr. Guy Griffiths had explained that since the Northern Suburbs Medical Association had taken this matter up, the sum of £25 had been paid into the Fund, and no moneys had been drawn out.

Dr. Bligh (the Honorary Secretary) called attention to the subject of medical practitioners visiting outlying centres, the consideration of which had been deferred at the last Annual Meeting of Delegates. Mr. Barr Brown advised the members of the Association not to pass any binding resolutions, on the ground of the difficulty which had arisen elsewhere as a result of the shortage of what he termed "war locums." The question was referred to the Committee.

Dr. A. S. Vallack read a paper entitled "Some Sidelights on Appendicitis." In the course of his remarks, Dr. Vallack recommended immediate operation in acute appendicitis in all stages. By acute appendicitis he meant any case in which there was pain of any severity and tenderness, a rise of temperature, an increase in the frequency of the pulse, or rigidity of the abdominal muscles. He emphasized the fact that he did not mean all of these signs and symptoms, but any one of them. He made one proviso: the operation should be performed by a surgeon, and not merely by a man with a knife, if the symptoms had lasted for over 48 hours.

Having dealt with the subject from a general standpoint, Dr. Vallack proceeded to analyse the symptom of pain. In regard to the intensity, he had formed the opinion that there was a relationship between this and the necessity for operation. He had never seen a case of gangrene or perforation in which severe pain was absent. These cases must be exceptional. In connexion with the distribution of pain, he pointed out that his views did not coincide with those expressed in text-books.

It was usually taught that the initial pain in appendicitis was situated in the epigastric region, and that at a later date it descended to the right iliac fossa. He maintained that the initial pain was in the umbilical region, about one inch above the umbilicus. The late pain was usually in the right iliac fossa, but not uncommonly it extended across the lower abdomen, and at times was felt more to the left than to the right. In attempting to account for the distribution of the pain as he described it, Dr. Vallack made the statement that the viscera are not supplied with any sensory nerves. Their nerve supply was derived from the splanchnic system. The splanchnic nerves communicate with the spinal nerves, and, in painful disorders of the viscera, disturbance in the splanchnic nerves set up pain in the area of distribution of the spinal nerve, with which the former communicated. In opposition to James Mackenzie, he held that the nerve distribution corresponded to the portions of the intestinal track which were derived from the fore-, the mid-, and the hind-gut of the fœtus. The fore-gut was represented by the portion above the opening of the common bile duct; the mid-gut was represented by the intestine from that point to the middle of the transverse colon, and the hind-gut by the remainder of the canal. Pain in the first section was referred to the epigastrium, pain in the second portion to the umbilical region, and that in the third portion to the hypogastrium. For this reason the pain arising from the appendix would be referred to the umbilicus. In regard to the late pain referred to the right iliac fossa, Dr. Vallack offered as a possible explanation that the pain is not felt until the parietal peritoneum was involved. He described his observations in this regard, which taught him that the sub-peritoneal tissue was highly sensitive.

In the next place, he dealt with the symptom of tenderness. He was in some doubt as to whether McBurney's point was correctly described at the mid-point of the line drawn from the umbilicus to the anterior spine of the ilium, or whether it was at the junction of the middle and lower thirds of this line. Whichever McBurney had described, experience had taught the speaker that the common seat of tenderness was at the mid-point of the line. He could not offer any explanation for this situation, inasmuch as the point did not correspond to any part of the normally situated appendix.

In regard to abscess, he remarked on the offensive odour, which was frequently ascribed to the colon bacillus. He could not understand the reason for this assertion. He was rather of opinion that it was due to the presence of one of the anaerobes found in the intestine. In regard to the treatment of abscess cases, he advised opening the abscess cavity as far away from the middle line as possible, when the anterior or lateral abdominal wall formed part of the cavity. A counter opening might be made in the loin. In retro-caecal abscess, the incision should be made in the loin, like that made for lumbar colostomy. Even if the abdomen were opened by McBurney's incision, and the abscess recognized, he advised the closure of the

peritoneum, and careful stripping of the peritoneum from the *fascia transversalis*, until the abscess was reached. In the third place, in intra-peritoneal abscess, he advocated that the space between the abscess and the anterior abdominal wall should be packed with gauze and the abscess left undisturbed. If the abscess had not ruptured spontaneously within 48 hours, he opened it with his finger. The gauze pack should be left *in situ* for some days longer. He did not believe in removing the appendix in abscess cases, and even after recovery, he only removed it when further trouble supervened or when the patient was going beyond the easy reach of a surgeon.

In the discussion, Dr. Kelly differed from Dr. Vallack in doubting whether the operation should be performed at any stage, even after 48 hours. He also suggested that a rise of temperature was always met with in an acute appendicitis. In regard to packing of the abscess cavity with gauze, he held the opinion that the gauze should not be left in position for more than 24 hours. He anticipated a very rapid formation of adhesions. Dr. Bligh recited the details of an interesting case in which pain was not complained of until the appendix ruptured. Several other points were dealt with by other speakers, including the question of pain in the meso-appendix, and the significance of rigidity. Dr. Vallack replied to the majority of the points raised.

Public Health.

SMALL-POX IN NEW SOUTH WALES.

The following number of small-pox cases has been reported to the Department of Public Health, New South Wales, during the week ending July 18, 1915:—

	Cases.
Country—	
Kurri Kurri	1
Hamilton	1
Total	2

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending July 15, 1915:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Diphtheria	50	1	49	2	99	3
Scarlatina	3	0	5	0	8	0
Enteric Fever	1	0	6	2	7	2
Pulmonary Tuberculosis	11	6	6	2	17	8

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending July 10, 1915:—

Disease.	Number of Cases Reported.
Diphtheria	38
Varicella	17
Enteric Fever	19
Pulmonary Tuberculosis	6
Puerperal Fever	1
Scarlatina	2
Erysipelas	3
Cerebro-Spinal Meningitis	4
Ankylostomasis	1
Total	91

HEALTH OF THE METROPOLIS OF SYDNEY.

The mortality return for June, 1915, as supplied by the Government Statistician, shows that 718 deaths occurred in the Metropolis, including 34 deaths of individuals previously resident outside the Metropolis, and deaths classified as taking place in the Islands and shipping in the harbour.

Thus, calculating on an estimated population of 752,500, the annual death-rate for the month works out at 11.45 per 1000 of the population.

Deducting the deaths of persons non-residents of the Metropolis, in the Mental Hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladesville), and adding the deaths of persons residents of the Metropolis, occurring at the benevolent asylums, mental hospitals and sanatoria for consumptives situated outside the Metropolis, the number of deaths was 692, giving a corrected death-rate of 11.35 per 1000.

Among children under 1 year of age, 97 deaths were recorded for the metropolis.

There were 1837 births during the month, giving the very satisfactory rate of 29.29 per 1000 of the population, being 10% above the average for June of the previous five years. The infantile mortality rate was 53 per 1000 births. The drop in the rate is very gratifying, being 20% below the average for the month of the previous five years.

Infective diseases were responsible for 35 deaths, of which 3 were due to measles, 3 to scarlet fever, 3 to influenza, 2 to pertussis, 10 to diphtheria, 9 to enteric fever, 2 to erysipelas, and 3 to puerperal fever. Diarrhœal diseases caused 20 deaths, pulmonary tuberculosis 62 deaths, cerebral hæmorrhage, 28; cancer, 57; diseases of the heart and blood vessels, 108; pneumonia, 69, bronchitis, 30; Bright's disease, 52; and accident or negligence, 20.

Compared with the average in June for the previous five years, there were increases in the number of deaths from pulmonary tuberculosis, pulmonary diseases, diseases of the heart, epidemic diseases, and Bright's disease, with decreases in diarrhœal diseases, senility and cerebral hæmorrhage.

Forty-six cases of enteric fever, 201 of diphtheria, 362 of scarlet fever, and 11 of malaria were notified during the month of June.

Seventeen cases of tuberculosis of the lungs and larynx were notified under the City Council's by-laws, and 10 premises were disinfected by the Council's trained staff after the deaths or removal of consumptive persons.

(Signed) F. M. SUCKLING,
Acting Medical Officer of Health.

Vital Statistics.

RETURNS FOR NEW SOUTH WALES FOR 1914.

The Government Statistician has issued a preliminary report on the vital statistics of New South Wales for the year 1914. The population of the State was estimated at 1,862,028 at the end of the year. This represents an increase of 29,572 during the year. The excess of births over deaths was 34,838, while the movement of population accounted for a decrease of 5,266.

Marriages.

The number of marriages solemnized was 17,353. The marriage rate of 9.36 per 1,000 of population is 4% above the average for the previous five years. The rate in the metropolis was considerably higher than that in the rest of the State. Of the persons contracting the marriages 3,737 females and 718 males were under 21 years of age, while 80 and 82 respectively were unable to sign their names. In regard to the conjugal condition, 867 of the brides and 854 of the bridegrooms were widowed, while 120 of the brides, and 156 of the bridegrooms were divorced.

Births.

The total number of births registered was 53,615. This is equivalent to a birth-rate of 28.93 per 1,000 of population. The mean for the 10-year period 1905-1914 was 28.28; the minimum being 27.15, in 1905, and the maximum 29.9, in 1912. To every 100 females born there were 105 males. Of the 53,615 infants born 2,778, *i.e.* 5.18%, were illegitimate. The illegitimate birth-rate has decreased steadily during the last 10 years. In 1905 it was 7.37%, in 1910 it was 6.37%, in 1912 it was 5.64%, and in 1913 it was 5.37%. The mean for the 10 years was 6.29%.

Deaths.

The number of deaths occurring in the State during the year was 18,777. Of this number 11,027 affected males, and 7,750 affected females. The death-rate for the year was

10.13. In 1910 it was 10.02, and in 1909 it was 10.04, and in 1906 it was 10.09. In 1905 the rate was 10.3, in 1911 it was 10.32, in 1908 it was 10.41, in 1907 it was 10.81, in 1912 it was 10.86, and in 1913 it was 10.91. The mean for the 10 years was 10.4.

The number of deaths of infants under 1 year of age was 34,687, which yields an infantile mortality of 69.7 per 1,000 births. This rate is higher than the rate for 1911 (69.5), but lower than that of all the other years since 1905. The mean was 75.4, and the maximum was 88.

Causes of Death.

The causes of death are tabulated as usual according to the Bertillon system, which, as we have pointed out repeatedly, is far from satisfactory. It must be recognized that no system would yield a reliable return of the causes of death as long as the death certificates are not based on post mortem examination, and as long as they are handed to the relative of the deceased. The diagnosis is probably most accurate in connexion with the acute infective processes. Excluding chronic rheumatism, gout, etc., and gastritis, but including chronic bronchitis, pleurisy, and simple meningitis, the total number of deaths from infective processes was 6,241. This is equivalent to 33.3% of the total number of deaths. Tuberculosis was responsible for 1,358 deaths, of which 1,137 were caused by pulmonary disease. Diarrhœa and enteritis killed 1,646 persons, 1,308 of whom were under two years of age. There were 728 deaths from pneumonia, 356 deaths from broncho-pneumonia, 322 deaths from chronic bronchitis, 250 from enteric fever, 247 from diphtheria, 208 from acute bronchitis, 155 from pertussis, 143 from appendicitis, 133 from simple meningitis, 100 from puerperal septicæmia, 94 from acute endocarditis, 91 from acute nephritis, 87 from influenza, 48 from pleurisy, 45 from syphilis, 38 from tetanus, 38 from dysentery, 35 from septicæmia, 28 from encephalitis, 27 from erysipelas, 24 from cerebral meningitis, 21 from scarlatina, 19 from morbilli, 18 from pericarditis, 14 from infantile paralysis, 12 from "croup," 3 from small-pox, 3 from malaria, 3 from other "epidemic diseases," 2 from gonorrhœal infection, and 1 each from leprosy, anthrax, and mycoses. Diseases of the cardio-vascular system were responsible for 2,727 deaths, exclusive of Bright's disease and diseases of the liver. This represents 14.5% of the total number of deaths. There were 1,512 cases of organic diseases of the heart, 642 of cerebral hæmorrhage, 210 of atheroma and other diseases of the arteries, 104 of embolism and thrombosis, 94 of acute endocarditis, 67 of aneurysm, 46 of angina pectoris, 18 of pericarditis, 18 of hæmorrhage, and 16 of diseases of the veins.

Malignant disease killed 1,390 persons, 732 being males and 658 females. Five hundred and forty-four of the cases were growths of the stomach and liver. In 192 cases the tumour was situated in the peritoneum or intestines, in 148 in the female genital organs, in 98 in the mouth, in 91 in the breast, and in 47 in the skin. There were 321 cases of cerebral disease causing death, of which 79 were instances of general paralysis. Diabetes is entered 174 times, anæmia 119 times, and Graves' disease 22 times. Alcoholism was responsible for 84 deaths, and indirectly for 23 deaths due to cirrhosis of the liver. In addition there were 104 cases of cirrhosis of the liver, presumably non-alcoholic in nature, 178 deaths from hernia and intestinal obstruction, and 17 from hydatit tumour of the liver.

There were 296 deaths of women in the puerperal condition. As stated above, 100 of these cases were puerperal septicæmia. In 53 death was due to eclampsia, in 42 to puerperal hæmorrhage, in 34 to accidents of pregnancy, in 31 to accidents of childbirth, in 21 to phlegmasia alba dolens, in 9 to illegal operations, in 5 to conditions not defined, and in 1 to puerperal diseases of the breast.

Deaths in early infancy are ascribed to premature birth, in 901 cases, to congenital debility in 440 cases, to diseases peculiar to early infancy in 139 cases, to injury at birth in 53, and to want of care in 2. There were 178 congenital malformations.

Of the deaths from violence 268 were cases of suicide, 1,119 cases of accident, 45 cases of homicide, and 75 not classified (open verdict).

SYDNEY AND NEWCASTLE.

The Government Statistician has issued the usual monthly returns of the vital statistics of Sydney and Newcastle in the Government *Gazette* of July 14, 1915. The month dealt with is June.

There were 1,837 births during the month, which is equivalent to an annual birth-rate of 29.29 per 1,000 of population. The number of male children born was 53 more than the number of females.

The masculinity of births, *i.e.*, the number of males to each 100 females was 106.83. During the years 1903 to 1913 the highest recorded masculinity was 108.85 in 1910, and the lowest was 103.61 in 1908; while the average was 104.96. The average for the whole Commonwealth during the same period of 11 years was 105.18. The Statistician calls attention to the extremely satisfactory birth-rate, more especially because it is 10% above the average for the previous 5 years. While we agree that 29.29 is a very satisfactory birth-rate, the total birth-rate during the year 1912 in New South Wales exceeded this rate, being 29.86. The birth-rate for Queensland exceeded it both in 1912 and 1913; that in South Australia exceeded it in 1913; that in Tasmania exceeded it in 1908, 1912 and 1913, and that in Western Australia exceeded it in 1903, 1904, 1905, 1906, 1907, 1908 and 1913.

During the month there were 132 illegitimate births, which is 4 less than the average for June of the preceding 5 years. The illegitimate birth-rate worked out at an equivalent to an annual rate of 2.11. The ex-nuptial birth-rate for the Commonwealth has varied from 1.52 in 1903, to 1.65 in 1906, during the 11 years mentioned above. Expressed in terms of percentages of total births, the illegitimate rate in Sydney during June was 7.18%. The average for the Commonwealth for the 13 years was 5.95. It must, however, be pointed out that the average for New South Wales during the same period was 6.52. Eighteen per cent. of the total births took place in institutions.

There were 718 deaths during the month, 375 affecting males, and 343 affecting females. Three hundred and forty of these deaths were of children under 4, and persons over 65 years of age. The equivalent annual death-rate works out at 11.45. This rate is higher than the average for June for the preceding five years. The annual death-rate for New South Wales averaged 10.5 during the past 12 years. In this period the highest rate was in 1903, viz., 11.67, and the lowest was in 1909 and 1910, viz., 9.89. The month of June appears to exercise a deleterious influence on the population, since the death-rate for the month was higher than its proportion of the death-rate for the year. The equivalent annual rate for June during the past 5 years worked out at 10.67, whereas the annual rate averaged 10.41.

There were 79 deaths of children under one year of age. This yields an infantile mortality of 53 per 1,000 births. The infantile mortality for the whole State during the year 1914 was 69.7. It is quite obvious that the methods adopted for the purpose of diminishing sickness and death of infants have been attended with considerable success. Not only is the rate for June, 1915, 20% below the average for June of the previous 5 years, but the rate has been decreasing in all urban and rural districts throughout the Commonwealth, save in the Northern Territory during the last two decades. The infantile mortality in 1903 in New South Wales was 110.35, and in the Commonwealth in the same year it was 111.36. The decrease has been steady since that year. It may further be pointed out that 53 per 1,000 births represents a very low figure indeed when compared with the infantile death-rate of other cities. Three years ago the lowest recorded rate was 64 at Amsterdam. London has an infantile death-rate of 91, Edinburgh one of 113, Glasgow one of 126, Dublin one of 140, Vienna one of 149, St. Petersburg (Petrograd) one of 249, and Moscow one of 333.

Eleven very old persons died during the month; three at 90 years, two of 91, one of 92, one of 93, one of 94, two of 95, and one of 98. Unfortunately the statistician does not mention the sex of these veterans. Of the 23 persons in the Commonwealth dying during the year 1913 at the age of 100 or over, no less than 15 were males. On the basis of the figures for the year 1913, it would appear that of every 2251 deaths 1 person of 100 or more is included.

The figures for the quarter ending June 30, 1915, are also appended. The birth-rate for the quarter was equivalent

to an annual birth-rate of 28.68 per 1,000 of population, and the death-rate was equivalent to an annual rate of 10.24.

In regard to the causes of deaths registered in the metropolis during the month of June, 1915, those dependent on diseases of the cardio-vascular system were as usual the most numerous, and numbered 133. Of these 76 were due to chronic valvular diseases of the heart, 28 to cerebral hæmorrhage, 9 to atheroma and other diseases of the arteries, 9 to acute endocarditis, 5 to angina pectorus, 3 to embolism, 2 to aneurysm, and 1 to hæmorrhage. Of the acute infective processes, tuberculosis heads the list with 54, of which 46 were instances of pulmonary disease. There were 43 deaths from pneumonia, presumably acute lobar pneumonia, 29 from broncho-pneumonia, 20 from diarrhœa and enteritis, 18 from chronic bronchitis, 13 of acute bronchitis, 11 from diphtheria, 10 of enteric fever, 9 from acute endocarditis, 4 from septicæmia, and 4 from syphilis, 3 each from morbilli, scarlatina and influenza, 2 each from cerebral-spinal meningitis, acute rheumatism, and erysipelas, and 1 each from dysentery, leprosy, and mycosis. There were 50 deaths from Bright's disease. Cancer is entered as the cause of 60 deaths, and anæmia as the cause of 11. There were 6 deaths associated with the puerperium, 4 of which were due to puerperal septicæmia, and one each to puerperal hæmorrhage and puerperal convulsions (eclampsia). There were 43 deaths of infants, 30 of which were due to prematurity.

During the quarter there were 353 deaths from diseases of the cardio-vascular system, including 191 from organic heart disease and 91 from cerebral hæmorrhage. Of the infective processes tuberculosis caused 132 deaths, diphtheria caused 24 deaths, syphilis 11, enteric fever 16, scarlatina 7, influenza 7, measles 6, pertussis 5, and cerebro-spinal meningitis 4. There were 161 deaths from cancer, 83 from pneumonia, and 90 from diarrhœa and enteritis.

The returns for the Newcastle district are given both for the month of June and for the quarter ending June 30, 1915. During the month there were 171 births, which is equivalent to an annual birth-rate of 34.84 per 1,000 of population. During the quarter there were 529 births, which is equivalent to an annual birth-rate of 36.08. Eleven of the children born during the month of June were illegitimate.

The number of deaths registered during June was 54, which is equivalent to an annual death-rate of 11.04, while the number of deaths during the quarter was 180, which is equivalent to an annual rate of 12.28. The infantile mortality was 88 per 1,000 births.

In regard to the causes of death, 30 were due to diseases of the cardio-vascular system during the quarter. There were 20 cases of organic diseases of the heart, and 4 of cerebral hæmorrhage. Of the acute infective processes, diarrhœa and enteritis accounted for 14 deaths, tuberculosis for 11, chronic bronchitis for 9, acute bronchitis for 5, pneumonia, broncho-pneumonia, and pleurisy for 3 each; diphtheria and simple meningitis for 2 each; and erysipelas, septicæmia, tetanus, and acute nephritis for 1 each. Cancer is entered 13 times, and Bright's disease 9 times. Of the 4 deaths associated with the puerperal condition 1 was due to hæmorrhage, 1 to an accident in labour, 1 to puerperal septicæmia, and 1 to an illegal operation. Twenty-seven infants died of premature birth, congenital debility, diseases peculiar to early infancy or injury at birth. In addition there were 3 deaths from congenital malformation.

SOUTH AUSTRALIA.

The returns of births and deaths registered in South Australia during the month of May, 1915, appeared in the South Australian Government *Gazette* of June 17, 1915.

During the month, 1,059 births were registered, which yields a birth-rate equivalent to an annual birth-rate of 28.8 per 1,000 of population. This rate is lower than that for the corresponding month in 1911, 1913, and 1914, and higher than in 1910 and 1912.

There were 380 deaths in the State during the month of May, 1915, which is equivalent to an annual death-rate of 10.32. This rate is lower than that of May of any of the five preceding years. Of the 380 persons who died, 89 were under one year of age, and 141 were over 60.

Diseases of the cardio-vascular system, as usual, accounted for a larger number of deaths than those of any other system. Of the 52 deaths, 31 were due to organic diseases of the heart, presumably chronic, 13 to cerebral hæmorrhage, and one to acute endocarditis. Infective processes accounted for 129 deaths. In 56 cases death was due to diarrhœa and enteritis, and in 39 of these the patients were under two years of age. There were 35 fatal cases of tuberculosis, 29 of which were pulmonary. Nine deaths from enteric fever, 5 from diphtheria, 5 from simple meningitis, 14 from pneumonia, 9 from bronchitis, 2 from morbilli, and 1 each from influenza, tetanus, acute rheumatism and acute endocarditis complete the list. Twenty-one deaths were due to malignant disease, 17 from Bright's disease. There were two deaths in the puerperal condition, both being due to septicæmia.

The returns for Adelaide show that, with a population of approximately 43,440, and a density of population of 11.5 to the acre, 89 births were registered and 57 deaths. The latter figure is exclusive of deaths occurring in public institutions of persons whose usual residence was not in the city. The corrected death-rate, expressed as an annual death-rate, works out as 15.72 per 1,000 of population. In regard to the actual causes of death, mention may be made of the fact of ten deaths having occurred as a result of diarrhœa and enteritis, and five as a result of pulmonary tuberculosis. There were no deaths from enteric fever, nor from septic or other complications of the puerperium.

THE MEDICAL INSPECTION OF VICTORIAN SCHOOLS.

The Minister of Public Instruction (the Hon. T. Livingston, M.L.A.) has presented his report for the year ending June 30, 1914. From the medical aspect, the medical examination of school children forms the basis of school hygiene. The total number of children dealt with by the three medical officers has increased to 12,943, and is the highest number reached in the four years' work. Of these, 10,808 belonged to elementary schools, and 2,135 to high schools. The selected schools are visited once in two years, with the exception of the largest high schools, which are inspected annually. The two years' schedule includes 27 high schools and 52 elementary schools, representing a school population of about 25,000 children, of whom 3,000 are in high schools and 23,000 in elementary schools. These numbers represent about one-eighth of the average total attendance of school children in the State schools and about one-tenth of the children between six and fourteen years in Victoria.

It is obvious that an increased staff of medical officers will be necessary before the benefits of medical inspection can be extended to the whole of the State. For the urban areas, six additional full-time officers will be required. The cost is estimated at one shilling per head of school population controlled, or two shillings per child examined.

The results of the examination of the children confirm the findings reported in previous years. Defects of sight are noted in one of every nine children; deafness in one of every twelve; defects of the nose and throat in one of every five, while over one-half were notified for dental treatment. The improvement noted as the result of treatment is manifested in the reports of every school visited. The re-visiting of schools has the added value of stimulating the parents and obtaining more widespread treatment of defects. The advisory nature of the work accounts for the fact that only about one-third of the children who need it obtain treatment. The Medical Advisory Board has recommended the appointment of two nurses to follow up the children and to prevail on the parents to have recourse to treatment. The appointment of school nurses will result in greatly increased attention being given to the treatment recommended. It is found that two-thirds of the mentally defective children fail to receive the necessary medical and dental treatment.

The facilities for treatment are not furnished by the hospitals, benefit societies and general medical practitioners. To remedy this deficiency three courses have been suggested: (*a*) The institution of a school dental clinic, financed in part by the State; (*b*) the opening of special departments at the State-supported general and special hospitals throughout Victoria; and (*c*) the equipment of travelling rural school clinics or the appointment of school oculists to deal with defects of vision.

The teaching of hygiene has received special attention. Courses of lectures are given at the Teachers' College, and to diploma students at the University. Suitable lessons are being prepared for high school students, but in the elementary schools the allotment of time has only allowed of slow progress.

Hygienic control by the bush nurses of the school children has been arranged for. By this means benefits which affect more than two thousand children have been conferred on remote rural districts. A subsidy is available from the Department in recognition of the services of the nurses.

The health of the pupils at high schools has been improved by the publication of information on the life-history and special illnesses of girls. The advisability of resident hostels is emphasized by the medical officers.

Although unremitting efforts have been made by the Department for the past four years, the control of epidemics of infective diseases is still inefficient. The need is felt for the proper utilization of scientific knowledge and for facilities for swabbing throats. An amendment of the present Health Act is advised by the medical officers. Children harbouring infective bacteria are occasionally allowed to enter schools in other districts. An amendment of the transfer form may be necessary. The advance made in the annual routine cleaning and disinfection of metropolitan schools has proved efficient, and marks a step forward in the hygiene of the school and in the prevention of disease.

To give teachers a better knowledge of the health of their pupils, and to assist in the anthropological survey work, weighing machines are being installed in some of the high schools and open-air pavilions. It is now recognized that the rate of growth of the child is a valuable indication of the state of health. By the courtesy of the Government Statist, standards of physical development are now available for high school pupils of fourteen to eighteen years of age. Height, weight, chest and cranial measurements have been analysed from records of about 12,000 boys and girls. The complete range of growth from five to eighteen years for Victorian children has been published. This information is already proving of assistance in the investigation of malnutrition. A summary of the medical reports and appendices will be published later.

Naval and Military News.

It is with great regret that we learn of the wounding of Lieutenant Wilfred S. Kent Hughes, son of Major Kent Hughes, of Melbourne. Lieutenant Kent Hughes was serving with the Light Horse Brigade in Egypt, and was attached to the Head Quarter Staff. He enlisted in the latter part of last year, and proceeded to the front as a sergeant in the "A" Company, 7th Battalion, 2nd Brigade of the Australian Imperial Force. A short account of his achievements leading up to his appointment as Rhodes Scholar has been published in *The Medical Journal of Australia* (January 2, 1915, p. 22).

The following casualties have been reported in the *London Gazette*, and published in the English daily press:—

Wounded: Lieutenant John P. Mitchell, R.A.M.C., M.D., Ch.B. (Aber.), of Fraserburgh; Lieutenant J. T. Heffernan, R.A.M.C., L.R.C.P.I. and L.M., L.R.C.S.I. and L.M. (Dub.), of Cashelgarron, county Sligo; Lieutenant Guy Dalzell McLean, R.A.M.C., M.B., Ch.B. (Glas.), of Cambuslang; Captain K. B. MacGlasan, R.A.M.C., M.D., Ch.B. (Edin.), F.R.C.S. (Edin.), D.P.H., of Leeds; Lieutenant R. O'Kelly, R.A.M.C., L.A.H. (Dub.), of Monkstown Castle, county Dublin; Captain Edmund Uniacke Russell, R.A.M.C., M.R.C.S., L.R.C.P., of London; Captain W. E. Falkinbridge, R.A.M.C., M.D. (Durh.), B.S., of Whitby; Lieutenant J. F. Ward, R.A.M.C., L.M.S.S.A., of Rochdale.

Wounded and Suffering from Gas Poisoning: Captain Lionel Chattock Hayes, R.A.M.C., M.B., Ch.B. (Birm.), D.P.H. (Camb.).

Casualties in the Mediterranean.—Wounded: Captain L. W. Jeffries, A.A.M.C., 4th Australian Field Ambulance; Captain J. J. Black, A.A.M.C., M.B., Ch.B., of Carlton, Victoria; Captain H. H. B. Cunningham, R.A.M.C., M.D., Brux. F.R.C.S.I., of Belfast.

The following announcement appears in the Commonwealth *Gazette* No. 75, under date July 17, 1915:—

Promotion.

His Excellency the Governor-General, acting with the advice of the Federal Executive Council, has been pleased to approve of the following changes, etc., in connexion with the Military Forces of the Commonwealth, viz.:—

3rd Military District.

A.A.M.C.—Lieutenant-Colonel (temporary Colonel) R. H. J. Fetherston, Director-General of Medical Services (temporarily), to be Colonel.

In the *London Gazette* of May 18, 1915, Dr. J. H. Saunders, M.B., of Perth, Western Australia, is announced to have been appointed Lieutenant in the R.A.M.C.

The following paragraph has appeared in the district Order No. 67 (2nd Military District), under date July 13, 1915:—

A.A.M.C.—

General Hospitals.

The following is the authorized establishment of General Hospitals for service in Australia.

This personnel will be mobilized from volunteers from A.A.M.C. and A.A.M.C. Reserve. Should there be insufficient volunteers from this source, personnel may be completed from Citizen Forces, or may be enlisted outside of Australian Military Forces for the term of the war or for such period as they may be required.

Nominations of officers and nurses to be submitted to a/D.G.M.S.

Rank and file to be mobilized at once and sent into Camp of Training with A.I.F., and detailed for hospital duty as required. All men for nursing duties to be trained at military or public hospitals.

This personnel will carry out duties connected with disembarkation, transport, and care of sick and wounded of the Australian Imperial Force, and Naval and Military Expeditionary Force, except for medical duties in A.I.F. Camps, Garrison Hospital, 2nd Military District; and Measles Hospital, Glenroy, 3rd Military District.

SICKNESS AT TRENTHAM CAMP.

During the past few weeks, much ado has been made of the amount of sickness in the Trentham Camp, and of the alleged want of proper organization. Late last month, the Prime Minister announced his intention of appointing a Royal Commission to enquire into the condition of the camp and the state of health of the troops. Alarmist rumours of large numbers of deaths have been spread about, and as is not unusual under similar conditions, the number of cases has been multiplied many times in the course of repetition. On June 30, the Minister for Defence stated that the cases of morbilli in the Wellington General Hospital numbered 43, and not 600, as had been stated. In all, about 400 cases of illness had occurred. These cases included measles and influenza. The total number of men at the camp was about 7,000. No measles patients were kept at the camp.

A very sweeping attack on the Australian Army Medical Corps in Egypt and on several of the senior officers is made in a letter published in the *Age* of July 12, 1915. The writer makes the statement that Dr. J. W. Barrett, who is acting as Registrar at the Heliopolis Hospital, under Dr. Ramsay Smith, has neglected his work by attaching himself to the Director of Medical Services for Australia, and by permitting serious mistakes to be made in the casualty lists. Colonel Martin, the Director of Medical Services for Australia, and Lieutenant-Colonel Ramsay Smith are charged with want of energy, and the writer expresses the opinion that, inasmuch as General Ford is in control of the Medical Services in Egypt, the Australian post is redundant. Moreover, he comments on the absence of General Williams, and ascribes this absence to the contention that he has no standing in Egypt, "and, for that matter, none in England."

If these charges, and a number of others, dealing with the understaffing of the hospitals, the shortage of splints, and other defects, are founded on fact, the officers responsible should be called upon by the military authority to give an account of themselves or to resign their positions. But the method of attack adopted by the writer of the letter appears to us to be objectionable, since it calls public attention to alleged defects before they have been investigated by the men in charge on the spot. Rumours have long been rife of friction among the officers of the A.A.M.C. in Egypt, and, at times, a specific instance of some supposed iniquity perpetrated by one or other officer have reached us. In fairness to our colleagues on service, and in justice to the service, these rumours have been brushed aside. It would be well if General Ford were to make an investigation and report on the conditions obtaining in the Australian Corps, and if any serious defects be found, a remedy could no doubt be suggested and carried into effect.

DENTAL REGISTRATION IN SOUTH AUSTRALIA.

Members of the dental profession in South Australia waited on the Chief Secretary at Adelaide, on July 9, 1915, to suggest the introduction of an Amending Bill to the Dental Act. The Hon. F. S. Wallis, M.L.C., introduced the deputation. He said that the dentists asked that the Act be amended to render the penal clause effective, to define the practice of dentistry so as to make it impossible for unregistered persons to engage in dental practice, to make provision for those unregistered persons who at present practice dentistry to qualify for registration by passing practical and oral examinations, to define strictly the conditions under which unqualified assistants can work under the immediate supervision of a registered practitioner, and to limit the number of unqualified assistants supervised by one registered dentist.

The President of the Dental Defence Association (Mr. W. A. Harrop) asked that legislation be provided to guard the public against unskilled operators. Dr. E. J. Counter asked that facilities be provided to enable students to become qualified. As there were at present no means for educating students he desired an institute for training dentists. He said that the Council of the University had promised to give a diploma if a college were established.

After a number of other speakers had supported the requests of the deputation the Chief Secretary replied that he sympathized with the Dental Board in its trying position. He could not promise to introduce a Bill in the present session. He was glad that the deputation had placed before him a scheme that seemed to satisfy all the members of the deputation, to enable the members of the Operative Assistants' Association to qualify for registration. He would recommend his colleagues to support the proposals, which would, in his opinion, bring about a settlement of the difficulties of the dentists to the satisfaction of the dentists and of the public whom they desired to protect.

Special Correspondence.

(From Our London Correspondent.)

LONDON LETTER.

King Edward's Hospital Fund.

The annual meeting of the Governors and General Council of King Edward's Hospital Fund for London, to receive the accounts and the report of the General Council for the year 1914, was held at St. James's Palace on April 19, 1915, the Speaker being in the chair. In the course of the proceedings, the Hon. Secretary read the following letter from His Majesty the King, through Lord Stamfordham:

Windsor Castle,
12th April, 1915.

Dear Sirs,—

I am commanded by the King to convey to the Governors and General Council an expression of His Majesty's deep sense of the great loss which the Fund has sustained in the death of Lord Rothschild, its Honorary Treasurer and Chairman of the Finance Committee.

It was at the request of his late Majesty, King Edward VII., then Prince of Wales and President of the Fund, at the inaugural meeting of the first General Council, that Lord Rothschild undertook the duties of Treasurer. His wise counsel and judgement have been of inestimable value to the Fund, and thereby have exercised a powerful and beneficial influence upon the hospitals of London.

His Majesty, as Patron of the Fund, cordially approves the action of the Governors in appointing as Lord Rothschild's successor Lord Revelstoke, who has for many years been an active member of the Finance Committee.

The King gratefully appreciates the services given by the Governors of the Fund, his Highness the Duke of Teck, Viscount Iveagh, and the Speaker of the House of Commons, in carrying out the duties of President during their five years' term of office, which expires in June next. Having ascertained that the Lord Chancellor, the Prime Minister, and the Governor of the Bank of England, pursuant to the Act of Incorporation of the Fund, are prepared to recommend their reappointment, His Majesty has commanded me to inform you of his intention, until the appointment of a President, to reappoint them to the office, the duties of which they have so efficiently discharged.

Yours very truly,

STAMFORDHAM.

Lord Revelstoke (the Honorary Treasurer), in presenting the account of receipts and expenditure and the balance-sheet for the year ending 31st December, 1914, said: "It will be noticed that the additions to the capital account are largely in excess of those shown in normal years. This increase is principally accounted for by the receipt for capital account of £313,000, being the amount received on account of the one-twelfth share of residue in connexion with the legacy of the late Sir Julius Wernher. The balance-sheet itself is clear, and would not seem to call for any particular comment; but it is satisfactory to be able to report that, in spite of the financial disturbance occasioned by the war, the receipt of income derived from investments continues to be quite satisfactory."

Sir Savile Crossby, the Honorary Secretary, presented the draft Report of the Council for the year 1914, and its adoption was moved from the chair. The proceedings terminated with a vote of thanks to the Speaker for presiding, moved by Sir C. Stuart-Wortley, K.C., M.P., and seconded by the Hon. Arthur Stanley, M.P.

The Patriotism of Shakespeare.

On March 25 Sir Sidney Lee delivered a lecture on "Shakespeare and Patriotism," before the Shakespeare Association, at King's College, Strand. At the present time, he said, it was appropriate to turn to the poet, whose broad view ranged over all phases of human emotion, to understand his conception of patriotism. In his dramas the subject frequently met with attention, and though dealt with incidentally, the treatment, regarded as a whole, gave a fertile illustration of the working of an instinct allied to the domestic affections and necessary to the health of a nation. He did not leave out of account the unhealthy development of the instinct, and he enforced its influence in promoting righteous conduct. Shakespeare represented patriotism in its two-sided aspect, as a spiritual sedative and a spiritual stimulant. The one was illustrated in the character of Bolingbroke, who, with a devotion to English soil, which he regarded as a mother or nurse, mainly expressed the tranquillizing influence of the home sentiment. On the other hand, to Falconbridge and Henvy V. patriotism was an inexhaustible stimulus to action, guided by morality and reason. Falconbridge was the manly soldier, who believed that a quarrel had better be fought out in honourable war than that self-respect should be sacrificed. He favoured a courageous, yet magnanimous, national spirit. Henry V., who was framed in a larger mould, stood for a similar wholesome patriotism, insisting that the sword should never he unsheathed except at the bidding of right and conscience, and his was the healthy instinct of the warrior who stiffens his grip on the justly

won fruits of victory. Shakespeare never confused patriotism with military aggressiveness, which was always exhibited in its proper colour, and he condemned the mindless patriot who strained after military glory. The stable interests of peace were the aim of so well-regulated a patriot as Henry V., who, at the close of the war, urged future neighbourly intercourse with France. The abnegation of the instinct and the inevitable logic of the punishment that followed its defiance were depicted in Coriolanus. Shakespeare's patriotism was not a blind adoration of his country. He had the finer aim of helping his country to realize her higher ideals, and he spoke as boldly of her errors as of achievements that won new laurels. His teaching was that it was the duty of a patriot to exercise his best powers of criticism to correct the national weaknesses. The dying speech of John of Gaunt emphasized the danger that greatness and glory might be dissipated when rulers were unequal to their responsibilities, and when a nation acquiesced in the depravity of its governors. Shakespeare enjoined on those who loved their country that they should make no unjust demands on others, that they should depend on the command of the sea, hold firm to the dear souls that had made the national reputation, and treat with disdain those in places of power who neglected their responsibility to the past, as well as the present. It was a sane and sober doctrine of patriotism that had lost little of its vitality, and was relevant to current affairs.

The Cost of Elementary Education.

During the year 1913-14, £26,314,098 was spent on elementary education in England and Wales. Of this sum, £25,095,062, or 95.4%, was spent on the normal service of the schools, including loan charges, salaries, and maintenance, the remainder being devoted to special schools, medical treatment, provision of meals, and industrial schools. The cost per child in ordinary schools was ninety-three shillings. The total receipts, other than from rates, of the 318 authorities concerned, were £12,254,245, including the Board of Education grant of £11,436,909. The net expenditure to be met out of the rates was £14,059,853.

Vital Statistics.

The population statistics return for England in 1914 was issued on March 12. A comparison with the figures for 1913 shows the following:—

	July-Sept.	Oct.-Dec.
Deaths, 1914	115,545 ..	130,882
Deaths, 1913	113,455 ..	123,261

The marriages for the whole year increased from 505,026 to 516,778, but the increase in marriage seems to date back to the summer of 1913, and is more probably attributable to the trade "boom" of two years ago.

Despite the heavy mortality of the last quarter of last year, it is still less than that of the first quarter of the year, the period when the weather is most fatal to the aged.

Once again the birth-rate has fallen. Last year it was 23.77 per 1,000, against 23.87 in 1913, 23.89 in 1912, 24.80 in 1910, and 26.66 in 1908. Last year's net addition to population was only 362,044, against 376,454 in 1913.

Correspondence.

WHITE AUSTRALIA POLICY.

Sir,—Permit me to dissent from the opinion of your correspondent "Cosmos" that "the so-called science of our universities is too limited in its scope to deal adequately with the policy of a white Australia." Had he substituted the word "politicians" for "universities" I think I could have agreed with him.

In an ordinary Mercator's projection map of the world be so treated as to rule out everything but the tropical belt between the tropics of *Cancer* and *Capricorn* it will be noticeable that nowhere, in the lands left, does white labour flourish. It is true that the Panama Canal zone is within the belt, and it is equally true, as your correspondent "M.B. Melb." trenchantly observes, "the Panama is a monument to medical science; but black men built the canal.

Your correspondent's observation as to the Panama being a monument to medical science is of particular interest to me, because I have long maintained that the "White Australia policy" is not a policy at all, but is in reality a medical problem of the first magnitude. In accordance with this belief I suggested in 1909 that the Commonwealth Government should organize a scientific and medical expedition, representative of the Australian Universities and the medical profession, to proceed to the Northern Territory with the object of investigating on the spot the suitability or otherwise of the Northern Territory of Australia for white labour. I was in Europe in 1910, and on my return I found, as so frequently happens with free trade in intellect, that one's own ideas had been consolidated by others, and there proceeded to the Territory one veterinary surgeon, one ethnologist, one geologist, and one medical man. Dr. Breinl, in all probability, was the only one of the quartette to whom the medical profession would be inclined to give a favourable hearing on the question of the adaptability of tropical Australia to white labour. This particular expedition was not therefore altogether competent to solve the problem involved, even if it ever had that intention.

This is not to maintain that the problem of white labour in tropical Australia is insuperable. Given suitable railway facilities, adequate housing on physiological lines, rational hours of work, proper dieting, the observation of hygienic laws, and the elimination of disease, much might yet be done to encourage the settlement of the North by white labour. But first must come the scientific expedition indicated by me in 1909, rather than that subsequently carried out.

Should such a commission report adversely, that would end, for the meantime, the policy or cry—call it what you like—of a white Australia. Should it report favourably, then the politician might with advantage devote himself to the still greater problem of finding the necessary white people to undertake residence in the sunny north. He should not, however, forget that the white population of Germany is as great, if not actually greater, than that of the British Empire.

Yours, etc.,
RICHARD J. A. BERRY.

University of Melbourne,
July 14, 1915.

INTUSSUSCEPTION IN AN INFANT.

Sir,—In *The Medical Journal of Australia*, of July 17, under the above heading, Dr. A. B. Brockway, of Brisbane, gives an interesting account of the way he dealt with a variety of imperforate anus. In this case it is clear that the proctodæum had developed into a normal-looking anus, but had not joined the rectum, being separated from it by a septum. This membranous septum, according to Ball, may even be protruded through the anus, when the infant makes violent, straining efforts to pass fæces. The child was three days old, and had been given doses of castor oil. He put his finger into the anus, and "felt a tense coil of small gut presenting." I take it, that this "tense coil" was the septum separating the proctodæum from rectum, which had become stretched and was bulging down to anus. This membrane he punctured with a hypodermic needle, and let out gas; then, with a pair of pressure forceps, he pulled down the now slack membrane, and, with a small table knife, cut off a piece about the size of his thumb-nail. There was no bleeding, nothing more was done, and the child recovered. Cases of intussusception in infants a few days old are met with, and some have been recorded, notably one by Dr. Charles Dowd, of New York (*Annals of Surgery*, Vol. I., 1913, page 713), in which he resected one-third of colon in an infant five days old, but I fail to see how the one reported by Dr. Brockway can be so classified.

Yours, etc.,
CHARLES P. B. CLUBBE.

195 Macquarie Street, Sydney,
July 20, 1915.

Personal.

We regret to record the death of Dr. Harry Leigh Atkinson, of Bendigo, Victoria, at the advanced age of 83. Dr. Atkinson qualified in 1853 as M.R.C.S., L.S.A., and in 1862

graduated at Melbourne University. He arrived in Australia in 1860, and settled in Bendigo after having held the position of resident surgeon at the Bendigo Hospital. Dr. Atkinson devoted a great deal of attention to mining and agricultural industries. He was married five times, and is survived by his widow, three daughters and two sons.

A short time ago it was reported that Colonel Cuscaden, Chief Medical Officer of the Commonwealth Defence Forces, met with an accident at the Victoria Barracks. We now learn that Colonel Cuscaden has recovered sufficiently from the effect of the accident to enable him to continue his military duties.

Dr. Francis E. McAree, of Middle Park, Melbourne, has been appointed physician to the out-patient department, St. Vincent's Hospital, Melbourne.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page ix.

Renwick Hospital for Infants, two Honorary Medical Officers.

St. Margaret's Hospital for Women, four Surgeons, four Assistant Surgeons, and one Anæsthetist.

Proceedings of the Australasian Medical Boards.

QUEENSLAND.

The following have been registered under the provisions of the "Medical Act of 1867," as duly qualified medical practitioners:—

Brünnich, Karl Ferdinand Christian, Taringa, M.B., 1913, Ch.M. 1914, Univ. Syd.

Howley, Edward Joseph, Wondai, L.R.C.P. and S. Edin. L.F.P. and S. Glasg., 1896.

Kelly, Patrick James, Auchenflower, M.B. Univ. Syd., 1913.

Steele, Andrew Buchanan, Beenleigh, M.B. Univ. Syd., 1907.

Additional Registration.

Flynn, John, Ipswich, M.D., Univ. Durh., 1914; F.R.C.S., Edin., 1914.

Books Received.

AMŒBIASIS AND THE DYSENTERIES, by Llewellyn Powell Phillips, M.A., M.D., B.C., F.R.C.P., F.R.C.S., 1915. London: H. K. Lewis. Demy 8vo., pp 147. Price, 6s. 6d.

BOTANY, CATECHISM SERIES, PART II., Second Edition, revised and enlarged 1915. Edinburgh: E. and S. Livingstone Pp. 152, Crown 8vo. Price, 1s. net.

MATERIA MEDICA AND PHARMACY FOR STUDENTS, by Reginald R. Bennett, with an appendix on incompatibility, 3rd Edition, 1915. H. K. Lewis. Pp. 242. Fcap. 8vo. Price, 4s. 6d.

URGENT SYMPTOMS IN MEDICAL PRACTICE, by Robert Saundby, M.D., 1915. London: Edward Arnold. Crown 8vo., pp. 437. Price, 7s. 6d.

Diary for the Month.

July 27.—Vict. Branch, B.M.A., Eye and Ear Section.
July 27.—N.S.W. Branch, B.M.A., Organization and Science Committee, Medical Politics Committee.
July 28.—Vict. Branch, B.M.A., Council.
July 29.—South Aust. Branch, B.M.A., Monthly.
July 30.—N.S.W. Branch, B.M.A., Ordinary.
Aug. 4.—North. Dis. Med. Assoc. (Tamworth).
Aug. 4.—Vic. Branch, B.M.A., Monthly.
Aug. 6.—Queensland Branch, B.M.A., Monthly.
Aug. 11.—Melb. Pædiatric Soc.
Aug. 12.—Annual General Meeting of the Australasian Medical Publishing Company, Limited, at Melbourne.
Aug. 12.—North Eastern Med. Assoc. (Tamworth), N.S.W.
Aug. 12.—Vic. Branch, B.M.A., Council.
Aug. 13.—N.S.W. Branch, B.M.A., Clinical Evening.
Aug. 13.—S. Aust. Branch, B.M.A., Council.
Aug. 17.—N.S.W. Branch, B.M.A., Executive and Finance Committee, Ethics Committee.
Aug. 18.—Vic. Branch, B.M.A., Clinical Meeting.
Aug. 18.—W. Aust. Branch, B.M.A., General.
Aug. 20.—Q. Branch, B.M.A., Council.
Aug. 24.—Vic. Branch, B.M.A., Eye and Ear Section.

Covers for binding *The Medical Journal of Australia* for Vol. I., 1915, can be obtained on application to the Manager, B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of a cloth cover is 2s., and of half leather 3s. 6d.; postage, 7d.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Mullumbimby District Friendly Societies. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Newcastle Collieries— Killingworth. Seaham Nos. 1 and 2. West Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to "The Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "The Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.